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ORIGINAL DEPARTMENT.

LECTURE.

AFFECTIONS OF THE EXTERNAL OCULAR MUSCLES IN GENERAL DISEASE.

A lecture delivered at the Jefferson Medical College, Spring Course, 1882.

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Reported by DR. GZO. F. SOUWERS.

GENTLEMEN:—I desire in this lecture to present for your consideration the effect of general disease, as it is possible to manifest itself in the impaired action of the external ocular muscles, and exhibits itself principally by producing the symptom of diplopia, or double vision; excluding, however, the condition of convergent and divergent strabismus, due to the state of the eye itself, and involving optical defects, as a primary cause; in such cases double vision is rarely complained of.

The subject is a difficult one, but yet interesting, and of practical value in treating disease. The study of Helmholtz' Physiological Optics is conducive to mental training, irrespective of what practical value it has in helping us in medical practice.

To fully appreciate the abnormal action of the organ of vision and its addenda, it is not only necessary to know the anatomy of the tissues of the eye, but also the optical anatomy of an emmetropic pair of eyes, as they are exercised in performing the act of binocular single vision.

In the visual act it is primarily and imperatively necessary that the fovea centralis of each eye should be directed to or receive impressions from the same object in space at the same time, in order to see singly.

At the fovea centralis the rods and cones of the retina are most exposed to the action of rays of light. The curve of the cornea and the curves of the crystalline lens bend the rays of light, which are parallel before they are acted upon by these structures, so that in an emmetropic eye a burning point or focus is made at the fovea centralis; a space on the retina irregularly oblong and  $\frac{1}{100}$  square inch in size. The location of the fovea centralis decides the position of the visual axis; elsewhere on the retina the focalization of rays of light by the dioptric system of the eye is not so effective, nor is the sense of sight so acute.

The sense of sight is most acute at the fovea centralis, as the sense of touch is at the tips of the fingers; elsewhere on the retina, sense of sight is like the sense of touch elsewhere than at the tips of the fingers; the more remote the less appreciation of the sense.

The external muscles of the two eyes must then act upon the eyeballs, suspended, as each one is, in the orbit, in such a way and with so much force as shall turn the fovea of each eye to the same point or object in space at the same moment of time, to give the mental impression of one image; if the muscles of either eye fail to do this, identical points, or rods and cones in the retina of each eye are not stimulated by pictures of identical spots or points in space, and diplopia or double vision results.

You must remember that the nasal half of the left retina is associated with the temporal half of the right retina, and the nasal half of the right retina with the temporal half of the left retina, while the superior half of each retina cor-

respond, and the lower half of each retina act together. When these identical spots in each retina are not controlled together beyond the point which give us stereoscopic vision, or sense of depth, objects contemplated which should, under control of the muscular sense, appear as one, are recognized as two, and they assume a position either one above the other, both along side of one another, or obliquely placed, according to which muscle has failed to act properly, and their separation depends on the amount of impairment of the muscle; the muscle may be either weakened, paralyzed, or undergoing spasm. The image displaced is called the false image and corresponds to the eye affected.

The sense of two images is perceived as we can produce the sensation of two objects through the touch, by crossing our fingers on one hand in feeling one object, instead of feeling the same object with our fingers in their normal position.

Your knowledge of the anatomy and physiology of the cerebro-spinal system and the nerves distributed to the eye, as well as to all the other organs of the body, enables you to know their normal function. Your clinical observation has afforded you full opportunities to observe how pathological changes in the cerebro-spinal system, as well as nerves going to the various organs, modify the action of separate organs, and you are aware of the influence of diseased conditions in the organs themselves, and their influence on the whole system.

The possibility of impairment of the action of the external ocular muscles, in rotating each eye, by changes in the cerebro-spinal system, or nerves going to the muscles, is easily understood, and by recognizing how a person sees objects in space, you are not only able to tell what muscle of the eye is affected, and what nerve is involved, but often are able to give a more exact location of the primary cause in a lesion present in the cerebro-spinal system itself.

Prof. Ferrier, in his experiments on the cerebral hemispheres by electrical irritation, has produced disturbances not only in the movements of the eye, but nearly all parts of the body. See Chap. VIII, "Functions of the Brain."

Diplopia becomes, then, a symptom of disturbance of the action of the external ocular muscles. The retina of each eye affords visual control over a definite extent in space; in binocular single vision, the definite fields of vision for each eye overlap each other to a definite extent also, and in this space formed by the overlapping of a cer-

tain portion of the fields of each eye, single vision for both eyes at once is obtained. This binocular field is called the horopter; to the outer side of this space we see double; and yet this does not annoy us, but is rather a source of protection. For while binocular single vision controls objects in front of us, we have a monocular single field to the right side, and also one to the left, and are able thus to see objects about us to a great extent, as in the act of walking is found necessary. If the limits and extent of the space which should physiologically overlap are not constant and fixed, or under control, a displacement occurs, and diplopia or double vision is produced; an abnormal horopter exists.

You must learn, then, to map out in front of you or your patients the normal horopter, and any abnormal horopter is soon recognized by both yourself and the patient; diplopia is an objective symptom as well as a subjective one.

A normal horopter gives no diplopia, an abnormal one produces double vision, and from the relative position of the falsely projected image to the true, you draw your conclusions as to which eye, muscle, or nerve, or what portion of the cerebro-spinal system, is at fault.

As three different nerves control the six external-ocular muscles of each eye, and the nerves arise in the brain on the side of the eye they control, you have in the accomplishment of binocular single vision the associated action of two sides of the brain; six nerves, twelve muscles and two eyes. The act of vision, then, is not unlike the attempt to drive a three-handed team with each hand; only, instead of one wagon to be conveyed, two are being pulled, and they must be kept in a given road without interference. The eyes are the wagons, the muscles the horses, the nerves the reins, and each side of the brain a hand; one rein controls one horse, a second rein another horse, while a third rein controls the remaining four for each side.

For a practical test, a candle held before you, or a blackboard divided into spaces by horizontal and vertical lines several inches apart, taking a vertical line on the board corresponding with the middle of the face and a horizontal line cutting the cornes at the middle; where these lines cut, is a point of fixation; holding the head still, you see where, in the different spaces on the blackboard, a piece of chalk appears single or double. A perimeter is an instrument to make the observation more exact, and affords a record to be made with minuteness. The candle to be held at several, the blackboard two or three feet

from the patient, and the perimeter at the same distance or nearer.

Double vision existing, and desiring to know which eye is at fault, by calling in another sense to help you, namely, touch, you soon clear the diagnosis. Covering each eye separately, and allowing the patient to attempt to touch an object quickly with the hand, the eye at fault prevents an accurate aim, and he misses the object. Then the rotary movement of both eyes in following the describing of a circle in front of the patient, affords a means of diagnosis by a peculiar jerking movement of the eye affected, according to which muscle is at fault. Observe the movement in a pair of healthy eyes and you will soon learn to recognize any deviation. Double images assume two positions in relation to each other, either the object for the right eye is on the right side, and that for the left eye on the left side, or the object for the right eye appears on the left side, and the object for the left eye on the right side; the former condition produces homonymous images, and the latter crossed images, or diplopia. This is readily ascertained by covering an eye quickly and see which image disappears; the right eye being covered, the right image is lost, it is homonymous; the left eye being covered, the right image is lost, it is crossed, diplopia. A red glass over one eye colors one image red, and you thus learn where it is located.

In paralysis of the external rectus of either eye, in paralysis of superior oblique and inferior oblique, the images are homonymous.

In paralysis of the internal, superior and inferior rectus, the images are crossed.

Double vision appears in different portions of the visual field, according to which muscle is affected, and the relative position of one image to the other varies in the same way, and they vary in different portions of the field.

In paralysis of the external rectus of the left eye, and internal rectus of the right eye, images are only double to the left side of a vertical line, in front of the patient; in paralysis of the right external rectus and left internal rectus they are only double to the right of this vertical median line. The images in either of the above cases are parallel in the middle of the field, and diverge at the top and bottom, in the upper and lower portion of the field.

Paralysis of the superior rectus of either eye gives double vision in the upper half of the field of vision; for the left eye objects are higher toward the left side, and obliquity increases to the right; for the right eye the reverse obtains.

Paralysis of the inferior rectus gives double vision in the lower half of the visual field, for the right eye the images more divergent to the left, and less oblique toward the right; the reverse exists for the left eye.

The superior oblique being paralyzed, the images are double in lower half of the visual field; difference in height and obliquity is most marked; for the left eye the vertical separation is greatest to the right, and obliquity to the left. Paralysis of the inferior oblique, which is rare, gives the opposite of the superior oblique. The diagrams before you illustrate all the conditions in paralysis of the various muscles when one muscle alone is affected; when more than one muscle is paralyzed the conditions are more complicated, but are readily diagnosed.

The false image appears nearer than the true one, or on a different plane from the true image.

By displacing one of your own eyes, by pressure of your finger upon the eyeball, corresponding to the location of the different muscles, you can observe all these conditions yourself; or using a prism, and placing it before the eye and looking with both, the same can be seen; the prism must be rotated before the eye, so as to have an effect upon all the muscles in turn.

By means of a prism placed before one eye, we can get an idea or rather an expression of the power of an ocular muscle.

A prism before one eye, the other also being used, gives double images; if the muscle corresponding to the position of the prism is able to unite these images, then place a prism of a greater degree and find a prism that prevents the union of these images. A prism weaker, that allows the fusion of the images, expresses the power of the muscle, just as the degree of the prism that unites images in a case when a muscle is paralyzed, gives the amount of the paralysis.

The muscles in their normal state overcome prisms, as follows:—

Internal rectus prism,	20° to 30°	base out.
External      "	6° to 8°	" in.
Superior     "	1°	" below.
Inferior     "	1°	" above.
Sup. oblique (my case),	8°	base obliquely bel.
In.           "	5°	" above.

You should know the length of the muscles, their weight, size, point of origin, course and place of fixation on the eyeball. For a more extended description of the manner in which binocular single vision is accomplished, you should study for yourselves, in works on Diseases of the Eye, and works on Physiological Optics.

The subject deserves far more than I have presented at this time, and we must now proceed to consider the subject of diplopia being a symptom in general disease, or in what diseases we may find diplopia as one of the symptoms.

Ocular symptoms of general diseases are of the most help in making a differential diagnosis; not unfrequently they are the only symptoms of a diathesis, or symptom of disease in another organ, and their recognition at other times is more evidence added to the other already existing.

Prof. Förster, of Breslau, in "*Handbuch der Gesammten Augenheilkunde.*" Sieberter Band erste Hälfte, cap. xiii., has presented the ocular symptoms in general disease and diseases of the other organs of the body, to whose classification may be added the Diseases of Old Age (Charcot). In this present course of lectures, I have been taking up each tissue of the eye, with its addenda, and giving the conditions as exhibited by the tissue or part of the eye, as produced by the diseases occurring in each system of general medicine, and we will apply the same method in studying the affections of the external ocular muscles, as a symptom of general disease.

Clinically, you will find that diseases of the orbit are the most productive of impairment of the action of these muscles; next affections of the spine and cerebral diseases the least frequent cause of diplopia.

The muscles, as the result of the various diseases, may be simply impaired in their action, or palsied, partially or completely paralyzed, or undergo spasm.

In diseases of the circulatory and respiratory systems, extravasation of blood into the orbit from diseased conditions of the walls of the vessels, or laceration of them from blows or penetration of foreign bodies into the orbit, affect the muscles in their action.

Fractures of the walls of the orbit may allow entrance of air into the orbit, and thus have an effect upon the muscles.

The orbital cavity connects, through foramina, with all the cavities of the head.

In Basedow's disease, while diplopia rarely occurs, the eyeballs protrude, either from weakening of the muscles, or condition of the vessels, or deposit of fat in the orbit.

The orbit, should only contain so much, and any increase or decrease of its contents, irrespective of the eyeball, which, strictly speaking, is anterior to the contents of the orbit, modifies the action of the muscles in a space either encroached upon or restricted.

In diseases of the digestive system, severe

constipation has been stated to produce an affection of the ocular muscles. A case is quoted where five or six times this happened to the same patient, a different muscle being affected each time.

No affections of the ocular muscles external to the eyeball are known to occur in diseases of the genito-urinary or reproductive organs of the male or female; certain portions of the eye do suffer through reflex irritation of these organs, however; masturbation and disease of the apparatus may produce asthenopic symptoms.

In diseases of the nervous system, a wide field is open to investigation, and diplopia occurs frequently, along with other more numerous symptoms of disease of the cerebro-spinal system, including the changes in the nerves going to the ocular muscles, and disease involving them in parts lying along their course to the eye.

Simple hyperæmia of the meninges of the brain or spinal cord, or nerves themselves; effusions into the arachnoid space around the nerves as well as changes in the nerve tissue itself, are sources of trouble and impair the action of the external ocular muscles. Periosteal changes also lead to pressure upon the nervous tissue, and modify the action of the muscles. In peripheral irritation following blows on the head or region of the spine, the symptom of diplopia is generally late in asserting itself. Any lesion at the base of the brain, and in and about the fourth ventricle, may give rise to diplopia. Gammata, tumors, aneurisms, tubercle, exostoses, are the most productive causes.

Small growths and lesions apparently insignificant in size, rather than gross lesions, are most likely to affect the ocular muscles or nerves going to them; statistics are as yet too small and observations not definite enough to be of great worth in this line of cases.

In tabes dorsalis, Prof. Charcot has found, in 208 cases, 30 cases presenting affections of the ocular muscles, and this symptom appeared early in the case.

In diseases of the skin, epithelioma, or malignant disease of the skin of the lids, may not only destroy the eyeball, but also the contents of the orbit may become involved; beyond this I know of no associated disease of the muscles from this system.

Rheumatism and gout being classified separately, the tendons of the ocular muscles are involved, as tendons of muscles elsewhere in the body suffer, and while diplopia does not exist, the act of rotating the eyeballs is painful, and their action is modified.

In acute and infectious diseases from changes in the nervous system diplopia occurs; typhus fever, diphtheria, scarlet fever. The condition of strabismus, so often attributed to measles and whooping cough, is to be attributed to optical defects; the convergent squint to hypermetropia, and the divergent to myopia. There are exceptions to this, however, its reverse occurring, and while the disease present may hasten the development of squint, it would have appeared later, irrespective of any disease.

In trichinosis the disease may develop in the ocular muscles, as elsewhere in the tissues of the body.

In constitutional diseases and diseases of mal-nutrition it is a more common symptom. Syphilis, in its varied forms of development, is the principal cause of diplopia, and gummata developing in the orbit and cranial cavity, and affecting the nervous structure itself, modify the normal action of the parts adjacent, by pressure.

Diabetes allows either a partial or complete paralysis of the ocular muscles.

After typhoid fever, malarial fever, or any cause that lowers the tone of the system, these muscles suffer with the whole body.

In old age lesions in the body that in youth might not have any effect on these muscles, allow an influence to be felt.

From the above, you see, quite a number of diseases have their effects upon the external muscular apparatus of the eye, and its presence should be recognized, not as a symptom of disease of an organ of special sense, but one belonging to general disease, and of value in helping to make a diagnosis.

A few words as to treatment: when diplopia is present, the methods of treatment for combating the disease which has produced the diplopia will relieve the diplopia, along with the other symptoms, and as it improves it becomes important as a factor in making a prognosis. To prevent accidents by misjudging the relation of objects in space and the true direction of things in front, it is better to have the eye at fault covered; so only the true image is observed. If this is not desirable, a prism before the affected eye, with its base toward the image desired to be brought into position, is advisable; as the condition improves weaken the degree of the prism, till, finally, none is necessary; or, in a case of total paralysis, to be worn constantly. Electricity is valuable. Operative procedure should only be undertaken late, not till you are confident no improvement can be attained by the other plans; and even then results

by advancement of the opposite muscle merely give a cosmetic effect, and diplopia in other portions of the field may exist. If blindness co-exists with the diplopia in an eye, operative measures are not to be thought of.

## COMMUNICATIONS.

### EXANTHEMATOUS NECROSIS OF THE SUPERIOR MAXILLA.

BY JOHN S. SMITH, D.D.S.,

Of Lancaster, Pa.

John S., a boy, aged four years, of the sanguine lymphatic temperament, strumous diathesis, residing in the country, was brought by his mother to my office, in July, 1881, at the suggestion of Mrs. Mary A. Wilson, M.D., and Dr. John L. Atlee, Sr., consulting surgeon of Mrs. Wilson, to have the oral cavity examined. When we first saw him, he presented a pitiable sight. He limped into my presence, the left leg being about one-half inch shorter than the other, caused by an ulcer in the popliteal space. Another ulcer opened on the left side of the thorax, below the clavicle, and one on the left arm near the insertion of the deltoid muscle. The left side of the face was swollen. The body was so emaciated that little hope was entertained of his life.

*History of the Case.*—In the early autumn of 1880 the child had an attack of bilious remittent fever. Other members of the family were similarly afflicted, one of whom, a cousin, died. About one week after convalescence the child complained of severe pain in his left upper jaw and face, for the relief of which the usual domestic face treatment, hot poultices, was resorted to. The face soon became swollen, and suppuration ensued; an abscess formed, pointing externally. This finally opened near the infra-orbital foramen, discharging large quantities of offensive pus. Subsequently, a number of the deciduous teeth upon that side of the face loosened; these the boy removed with his fingers. Later, a large portion of the maxillary bone and process came away with the remaining deciduous teeth, together with the crowns of the undeveloped bicuspids.

The patient had received no medical treatment from the time he had the fever, in the fall of 1880, till within a month of the time he visited me, in July, 1881, when he came under medical treatment.

*Diagnosis.*—The foregoing history of the case is sufficient to establish the diagnosis to be ne-

rosis of the maxilla, the extent of which, however, would not be so plain without an examination of the oral cavity.

An examination revealed the parts to be inflamed. The floor of the antrum had come away with the detached sequestrum.

Fortunately, the floor of the orbit (a large portion of which is made up by a process, the orbital, which is part of the superior maxilla), the roof of the antral sinus, was not disturbed.

The left permanent incisor, and the cusp of the canine and first permanent molar, were found loosely imbedded in the stroma. A sinus could be traced with a delicate probe, from within, upward and outward, to a fistula under the rim of the orbit, through the palpebral muscle.

The lower eyelid was drawn downward and turned outward, exposing the inner aspect of the lid, causing an unsightly appearance.

There was some conjunctivitis. The lachrymal flow was profuse. The secretions kept up the irritation to the parts below the eye. The jaw had sustained no external injury. The teeth removed with the sequestrum showed two superficial cavities. The pulp was not exposed. We excluded pulpitis, pericementitis, dental and alveolar necrosis, as a definite signification of the lesion.

In accordance with the clinical history, we class the case with exanthematous necrosis, as the result of the exanthemata. It occasionally, though fortunately quite unfrequently, happens, says Prof. James E. Garretson, "that a subacute inflammation of the jaw occurs, resulting in limited, or, it may be, in extensive necrosis of the part affected." Dr. G., in his clinical and private practice, has met with quite a number of cases.

To Sir James A. Salter, of Guy's Hospital, is accorded the credit of having first directed attention to this form of disease, as far as the recognition of its associations is concerned. The child's age, being under five years, would exclude osteitis as a primary expression connected with dentition, whether first or second.

*Local Treatment.*—The patient was etherized, and the remaining sequestrum removed with the forceps, and the parts thoroughly cleansed. The undeveloped central incisor, canine and first permanent molar, held in the soft stroma, were only acting as irritants, thus keeping up the inflammatory condition of the parts; it was thought best to remove them also.

Pus was almost constantly flowing, either through the sinus under the eye, or being taken into the stomach. A suitable probe was now carried

through the fistula, making better vent for the pus outwardly. The sinus was now thoroughly washed with tepid water, throwing it through with a syringe. The subsequent local treatment was stimulating and antiseptic. The parts were ordered to be cleansed frequently by syringing the sinus, thus getting away the offensive, semi-putrid pus, in place of allowing it, as before, to pass into the stomach.

The following wash was ordered, to meet the requirements of the case:—

R. Tinctura capsici,	f <sup>3</sup> ss
Tinctura myrræ,	f <sup>3</sup> ij
Potassæ permang.,	3j
Aque destillatæ,	Oj. M.

SIG.—Syringe the parts frequently.

*General Treatment.*—The constitutional treatment consisted in the exhibition of the iodides; of these the iodide of potassium and the syrups ferri iodidi were given for at least a month prior to receiving local treatment. The treatment was continued for several months after the sequestrum was removed. The patient was advised to take frequent exercise in the open air, and to be given good, nourishing food. In six months he made a good recovery, and was dismissed cured. All that remains to be accomplished in the case is a small, plastic operation upon the eyelid; this will be attended to at a future time.

#### FOREIGN BODIES IN THE POSTERIOR SECTION OF THE GLOBE.

BY M. LANDESBERG, M.D.,  
Of Philadelphia.

Cases in which a foreign body, after having penetrated the walls of the globe, has remained for years in the posterior segment of the eye, without causing inflammation and subsequent loss of vision, are of very rare occurrence. Of these instances only thirteen are recorded in the whole medical literature. This tolerance to foreign bodies in its interior, with preservation of good, respectively normal sight, has its counterpart in the tolerance of the brain to the presence of foreign bodies in its tissue, with preservation of normal mental functions. But as in the latter instance the rest may be temporary only and reaction may set in at any time, so may the normal condition of the eye in the interior of which a foreign body is imbedded be disturbed at any time by the outbreak of an inflammatory process, which may not only cause the total loss of vision in the injured eye, but may also involve the other eye in the morbid process, endangering its vision by sympathetic ophthalmia. Should such cases have the only

merit of their being so rare, they would deserve publication every time they happen. But having such an important bearing upon the practice, I need no excuse for drawing the attention of the profession to the following three cases, which have come into my notice during my practice.

**CASE I.—CHIP OF STEEL IMBEDDED IN THE POSTERIOR SECTION OF THE GLOBE, WITH RETENTION OF GOOD SIGHT, DURING AN OBSERVATION OF ELEVEN YEARS.**

Mechanic, C., 31 years old, presented himself, January 3d, 1870, seventeen hours after a small piece of red-hot iron had struck his right eye. Examination showed: Superficial erosion of the lower lid, near the outer commissure. Several eyelashes are scorched. The conjunctiva of the eye ball highly congested. The outer part of the sclera, embracing just the triangle which is formed by the opened lids, exceedingly chemotic; cornea normal; anterior chamber clear; iris hyperæmic; pupil contracted; upper ciliary region sensitive to the touch; tension normal. On atropia, pupil dilates but slowly, and hardly in the medium. Lens intact; optic disc slightly opaque, highly congested, and of indistinct limits. Somewhat below the lower border of the optic disc, outward from the inferior branch of the retinal vessels, there is an irregularly-shaped whitish exudation, which, rising somewhat above the level of the retina, immerses into the latter without distinct limits. In the centre of the exudation there is a foreign body of bluish lustre and of oblong shape. It is lodged in the tissue of the retina with one end, while the other point projects into the vitreous humor. The latter is of reddish hue, and shows a small, bunch-like opacity, which starts in the form of a stalk, from the locality from where the foreign body projects into the vitreous humor. Inward from the exudation there are several small ecchymoses.  $V = \frac{1}{105}$ , Jaeger 8. The objects appear somewhat reddish. Field of vision cannot be distinctly measured.

In spite of absolute rest in a darkened room and the appropriate treatment, the reactive symptoms were very intense, and the danger of panophthalmitis imminent. Vision decreased to counting fingers at 8'. But improvement set in from the fifth day and recovery progressed very favorably. On the eighteenth day after the injury the eyeball showed but very slight inflammation. Iris was slightly hyperæmic, pupil medium dilated and without adhesions. Vitreous humor contained only a few filiform opacities. Optic disc hyperæmic, slightly suffused, and of indistinct limits, showed on its inner border a

flat extravasation. The exudation was somewhat flatter and smaller, and of gray color. It was surrounded by small masses of darkish pigment. Inward from the exudation there were several flat ecchymoses in the stage of resorption. The foreign body lay flat, embedded in the exudation, representing a darkish line of about two millimeters in length. There were some choroidal atrophies and patches of pigment in the upper outer periphery of the retina.  $V = \frac{1}{10}$ , Jaeger 8. Field of vision normal. No scotoma.

At the time of the discharge, in the first days of March, the condition was as follows:—

No symptoms of irritation whatever. Vitreous humor contains only a few filiform flakes. Optic disc slightly hyperæmic, of distinct limits. Instead of the exudation we observe in the retina an oblong, grayish streak, in which the foreign body lies embedded. The borders of the streaks and the adjacent parts of the retina are occupied by pigment cells. The ecchymoses have almost resorbed.  $V = \frac{1}{10}$ , Jaeger 2. An irregularly shaped scotoma appears occasionally, on dazzling light, in the upper inner quadrant of the field of vision.

Examination, repeated July, 1871, after patient had borne, without the least inconvenience to his eye, all the fatigues of the German-French war, showed  $V$  almost  $\frac{1}{2}$ . In the background of the eye patches of pigment and the oblong, dirty-gray streak, through which the foreign body could be seen, but on favorable illumination only, as a dark line.

I saw patient again, by chance, June, 1881, after I had lost sight of him for ten years. The eye had remained healthy all the time.  $V$  was  $\frac{1}{10}$ . The dirty-gray streak was totally covered by small clusters of pigment, which left no trace of the foreign body.

**CASE II.—SPLINTER OF IRON IMBEDDED IN THE RETINA, BETWEEN OPTIC DISC AND MACULA-LUTEA, WITH RETENTION OF NORMAL SIGHT DURING AN OBSERVATION OF FIVE YEARS.**

Mechanic, S, 35 years old, came to me June 5th, 1877, two hours after a chip of iron had struck his left eye. There was moderate subconjunctival injection, slight photophobia and lachrymation. The cornea presented, on its outer border, just on the horizontal meridian, a small penetrating wound, and opposite the latter there was, in the stroma of the blue iris, a linear dark streak of about 2 mm. in length. Anterior chamber was clear, pupil somewhat contracted. Background of the eye could not be distinctly seen.  $V = \frac{1}{10}$ , Jaeger 1. Field of vision normal.

Impressed with the idea that the dark streak in the stroma of the iris might indicate the place in which the foreign body had lodged, I abstained from instillations of atropia, in order to avoid any dislocation of the foreign body by the contraction of the pupil, and resorted at once to iridectomy. But no foreign body could be found in the removed piece of iris. The healing process was normal. Examination, made June 18th, after the pupil had been dilated to the utmost, showed lens perfectly clear. Some filiform flakes in the vitreous humor, and on the retina, between optic disc and macula lutea, a circumscripted, whitish exudation, through which a dark, pointed body, of oblong shape, could be distinctly seen. The outer border of the exudation, near the macula lutea, contained some small blood extravasations. There was but slight retinal hyperæmia. V.  $\frac{1}{2}$ . Outward from the point of fixation there was a small scotoma, of oval shape.

Under appropriate treatment the symptoms of irritation vanished rapidly, vitreous humor cleared up entirely and exudation resorbed. The place was marked by the appearance of small nests of star-shaped pigment cells, which, rapidly proliferating, collected into small clusters, which lay close to each other. Finally, all line of demarkation vanished, and we had before us a small conical hill of pigment, under which the foreign body was buried. August 4th, patient was discharged with V.  $\frac{1}{2}$ , and with normal field of vision. This condition remained unchanged during the five years of further observation.

**CASE III.—SPONTANEOUS ELIMINATION OF A SPLINTER OF BRASS FROM THE INTERIOR OF THE EYEBALL, FOLLOWED BY RESTITUTION OF NORMAL VISION.**

Mechanic, M., 25 years old, came to me, April 26th, 1881, with the following condition of his left eye: Slight lachrymation and photophobia. Intense peri-corneal injection, and considerable venous hyperæmia of the mucous membrane of the eyeball, which is especially pronounced in the segment bordered by the opened eyelids. In this part there is also serous infiltration. The outer border of the cornea, just opposite the insertion of the external muscle, shows an irregular, small scar, and beneath the latter there is a small, jagged loss of substance in the iris. The latter is hyperæmic, and of greenish color. Pupil dilates only slightly to atropia, and displays multiple filiform adhesions to the lens capsule. The latter is occupied by punctiform exudations. Vitreous humor is hazy.

Background of the eye cannot be seen. Tension is slightly diminished, and the upper ciliary region sensitive to the touch. V. =  $\frac{1}{16}$ , Jaeger 18. The space between the insertion of the external muscle and the sclero-corneal border is occupied by a deep ulceration, having the form of a crater, the edges of which are hard, prominent and infiltrated. Through the layer of pus which covers the bottom of the ulcer, a glittering body, of the size of a pin's head, can be seen, which feels hard when probed. After the bottom of the ulcer had been cautiously cleansed, there could be distinctly recognized, best by means of a magnifying glass, a glittering three-pronged point of a foreign body, the whole of which was lodged in the interior of the eyeball. I succeeded to grasp the point with forceps, and to extract the whole body, which presented itself as a fine, oblong splinter of brass, of  $2\frac{1}{2}$  mm. in length.

Anamnesis revealed that, on February 13th, a chip of the piece of brass patient was just shaping on the lathe had struck his left eye, causing, immediately, intense pain, which kept on for hours. A physician, to whom patient applied at once, could not find the foreign body. The consequent inflammation was combated by all possible antiphlogistic measures, to which was added, in the third week, an attempt to remove a piece of iris, which is indicated by the jagged loss of substance in the iris, as referred above. But all these procedures failed to give any relief. Vision sank rapidly. April 20th, patient first noticed the appearance of an ulcer near the outer border of the cornea.

Compressive bandage, applied on both eyes, brought about quick and smooth closure of the wound. Irritation subsided entirely. After iridectomy vision increased to  $\frac{1}{8}$ . Vitreous humor cleared up, so as to allow ophthalmoscopic examination. There was equatorial choroiditis, whitish plaques, and disseminated clusters of pigment in the retina.

A mercury treatment, combined with the internal use of the fluid extract of jaborandi, brought vision to  $\frac{1}{2}$ . Vitreous humor cleared up almost entirely, and the whitish plaques disappeared.

—The *Boston Med. and Surg. Jour.* says: The necrology of both Harvard and Yale Colleges this year is of interest as showing the tendency to longevity amongst educated men. Of the 78 dead in the Yale list for the year, 81 were seventy years of age or over, the average being over seventy eight. Of the 71 dead in the Harvard list, 29 were over seventy, the average being over seventy-seven years. In each list the extreme age reached was ninety-six.

## HOSPITAL REPORTS.

HOSPITAL COLLEGE OF MEDICINE,  
LOUISVILLE, KY.

CLINICAL LECTURE, BY DUDLEY S. REYNOLDS, M.D.

Professor of Ophthalmology and Otology.

Stenographically Reported for THE MEDICAL AND  
SURGICAL REPORTER.

Otitis Media Purulenta.

Inflammation of the middle ear is a disease confined to no particular class of people, to no rank or station in life, although it would appear to be limited, in its geographical distribution, to those sections known as malarial. Tuberculous subjects, syphilitic subjects and habitual smokers are particularly subject to different forms of inflammation of the middle ear, the nature of the process being dependent always upon the cause. The catarrhal and the blenorhoeal may be generally though not always readily distinguished one from the other, as well as from other forms. It may perhaps be well to include the parasitic, which results from the invasion of the morbid process from without inward, through a perforated drum membrane, though it is not my purpose to consider in detail at present all the varieties alluded to.

It may be laid down as a rule in practice, that all discharges of pus from the external ear come from the tympanic cavity, through the perforated drum membrane. There are, however, a few exceptions to this rule, yet, if the rule be recognized and the practitioner proceed accordingly, the safety of the patient will be secured as far as medical skill may be relied upon. No one but the skilled aural surgeon may be able to determine the difference between those forms of otitis discharging pus externally from abscesses forming in the course of the external auditory canal, and those more common forms, the discharge from which originates in the cavity of the tympanum. If, however, the Eustachian catheter be employed with sufficient care in those cases where Valsalva's method of inflation is impracticable, the current of air may often be forced into the cavity of the tympanum, blowing out all the morbid contents through the perforated drum membrane, or where no perforation exists, by the counter current of air down by the side of the catheter, through the Eustachian tube into the fauces. The first point to be considered is the location of the morbid matter, whether it be pus, muco pus, or bloody serum. Otitis media is a very common form of catarrhal inflammation, extending by continuity of structure through the walls of the Eustachian tube from the pharynx to the tympanum, and it very rarely occurs in persons who are not already affected by the constitutional manifestations of malarial poisoning.

It is therefore important to supplement the local by constitutional treatment.

To illustrate these points, I have before you M. O'C., aged 9 years. She is well nourished, and has been apparently in good health until day before yesterday, when she appeared stupid at school; was kept in for not knowing her lessons, and when she returned home at 4 o'clock,

complained of headache, and suffered from fever during the night. Yesterday morning she had a cough, was hoarse, and suffered from obstruction of the nose; last night she was seized with violent pain in the right ear, which has continued unabated to the present moment. She has been subjected to the application of hot flaxseed poultices to the ear and the whole side of the head. These I just a moment ago removed, and now examination shows a reddish yellow tint, and bulging of the drum membrane, the external auditory canal being entirely free from any kind of morbid material. Puncturing the posterior and inferior quadrant of the drum membrane allows a quantity of straw-colored serum to escape, and the child refusing to try Valsalva's method of inflation, I pass a Ginsoul catheter through the nostril into the faucial orifice of the Eustachian tube, and apply the nozzle of a Politzer's air-bag to the distal end of it, gentle compression being followed by a gurgling sound and the escape into the external ear of about half a fluid drachm of bloody serum and some shreds of lymph. (From the moment of puncture the pain abated, and as soon as the morbid matters were blown out of the cavity of the tympanum the child expressed herself as entirely relieved.)

She shall now be ordered to take five grains each of calomel and chlorate of potash in one powder, and ten grains of quinine as soon as this shall have operated upon the bowels. She is to report to-morrow morning, and I am confident, from past experience in such cases, that she will have no more pain, and that the trouble will by that time be so far recovered from as to allow closure of the puncture in the drum membrane, the accumulating fluids making their exit through the Eustachian tube into the pharynx.

Annie D., aged 7 years, has had a discharge from the left ear since infancy. The disease in her case came on much after the manner detailed in the case just before you. The family physician, after the drum membrane ruptured and the matter began to escape externally, said it would not be safe to arrest the discharge, lest the disease might go to the brain and prove fatal. His advice was accordingly taken. Two weeks ago, to-day, the child was brought here with a very offensive discharge from the ear and almost complete loss of hearing. Examination revealed depression of the drum membrane of the right ear and an absence of the inferior half of it in the left. The nose was occluded with pus; the posterior wall of the pharynx, as seen through the mouth, appeared glazed and intensely red.

The child had been under the treatment of a great many physicians, and, of course, a great variety of therapeutic measures had been tried. You may remember the astonishment expressed by her mother when, two weeks ago, to-day, with the aid of an atomizer and a solution of chloride of sodium, five grains to the ounce of water, the nasal passages were cleared. The nasso-pharyngeal space was in like manner cleared, and the introduction of the Eustachian catheter first into the left side resulted in the blowing out of the ear a large quantity of tough mucus, a quantity of pus, and afterwards a little bloody serum.

The odor was horribly offensive, and I introduced about two drops of listerine into the distal end of the catheter, and applying the Politzer air bag, forced it through the middle ear into the external canal. The bad odor was almost instantly overcome. The catheter was next applied to the right side, and the drum membrane easily forced into its proper position, a flapping, tearing sound, following each compression of the bag, was produced by the escape along the side of the catheter, into the pharynx, of the tough mucus which is generally present in chronic moist inflammations of mucous membranes.

The child's hearing was almost instantly restored to a degree permitting conversation to be heard. I have practiced the introduction of the catheter into the left Eustachian tube, and the application, as already detailed, of the listerine, almost daily, and now to day, before I begin the treatment, you observe she hears my watch with the right ear at the distance of eight inches. The amount of discharge from the left ear is so slight that no overflow has occurred to-day. The mother informs us that the child's ear was washed out with a syringe and salt water, as usual, early this morning, after which two or three drops of listerine were instilled. There is at present but a faintly perceptible odor accompanying the discharge. The pus is no longer present in the nose or pharynx.

The only treatment for the nasal and pharyngeal affection, aside from the use of the atomizer, with the chloride of sodium, followed by a dilute preparation of listerine—one part to three of water—has been the occasional snuffing of the powdered borate of soda.

Miss W., wt. 24, has had a discharge from the right ear since infancy. She had a polypus in the left ear, which filled up the whole canal, and extruded nearly half an inch beyond the tragus. She said this had been removed a great many times by different surgeons, but it always returned. One month ago to-day, you may remember, I injected it with a 60 gr. solution of chromic acid. A week afterwards there remained only a small portion of the stump, which was again likewise injected.

The whole mass of morbid tissue disappeared. The right ear was catheterized from time to time, and listerine blown through the catheter, in order to insure its contact with the walls of the tympanum. The drum membrane has been partly renewed in the right ear, and almost wholly so in the left, the polypus having sprung from the petrous portion of the temporal bone, near the point of union between the drum membrane and the wall of the auditory canal. There is now but a very slight discharge from each ear, no offensive odor, and the patient is able to hear all ordinary conversational tones. You may remember, when she first came to the clinic she was almost entirely deaf, and stated that she could not hear it thunder, though she could see it.

Mr. H., wt. 28 years, lives in Charleston, Indiana; came two months ago with an offensive discharge from both ears, unable to hear the loudest tones distinctly enough to conduct a conversation. I present him to you to-day, with a small perforation in each drum membrane, no discharge whatever, and, as you perceive, able

to engage in ordinary conversation. He hears my watch, which should be heard at thirty-six inches, four inches from the right ear, and by slight contact with the pinna of the left. Mr. H. has been treated regularly twice a week, as most of you know, by the introduction of the Eustachian catheter, first blowing out all morbid materials from the tympanum, and then the introduction of one drop of the listerine, which was blown through the tympanic cavity. He has used powdered white sugar and tannic acid, in the proportion of a drachm of the acid to the ounce of sugar, as a snuff, twice every day.

His pharynx, which was filled with purulent accumulations, now presents very nearly a normal appearance, and his voice is clear, whereas before it was muffled. I may mention that he has taken iodide of potassium, beginning with ten grains every four hours, and increasing by the addition of five grains to the dose every ten days, until he now takes thirty grains. There is no history of syphilis, and he presents none of the characteristic phenomena. The iodide of potassium was suggested by the engorged state of his lymphatic glands. His tonsils, which were larger than almonds, are now invisible. Thus you see Mr. H. has been relieved of what, for years, rendered him odious to his friends in a double sense. The odium of being too deaf to engage in conversation, has disappeared, as the odor which offended the nostrils of his companions has likewise passed away.

Unable to go more fully into the subject, I feel that, from the cases before you, two important points as to local treatment, or rather as to the action of local agents, should be mentioned more particularly. First; there is in such cases the necessity for an agent which has the power to dissolve the fibrinous matters upon the surface of the inflamed mucous membrane, and immediately following this, an agent which has gently stimulating, astringent and antiseptic powers. The first agent, as you have seen, is found in the chloride of sodium, the second in listerine. Listerine is something more than a mere antiseptic, which its inventor, Mr. Lambert, has very extensively advertised as its chief virtue. It is a stimulating, balsamic astringent. It contains boracic acid, the essential oil of eucalyptus globulus, thymol and some other less important ingredients. It mixes freely with water, and may be used as a local application to all purulently inflamed surfaces, diluted to any extent desirable, or as in the cases before you, in full strength. With chloride of sodium and listerine, you have, therefore, but little to desire in the way of local applications in otitis media purulenta.

## MEDICAL SOCIETIES.

### TRANSACTIONS OF THE OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting, Thursday, October 5th, 1882. Vice-president, T. M. Drysdale, M.D., in the chair.

Dr. W. Goodell exhibited the specimens, and gave the histories of the following cases.

## Renal Cyst.

Mrs. C. M. G., aged 52, and married for twenty-eight years, has had three children, the youngest of whom is twenty-five years old. For many years she has had pain in the left renal region, and sharp attacks of gravel. This pain was so increased by jolting, that she was unable to drive, even in a carriage with double springs; but she has never experienced the excruciating pain of a stone passing down the ureter; of this she is positive. Four years ago she began to enlarge, but she did not suspect a tumor. As her health grew worse, she came on from the west, and in last July consulted Dr. J. F. Bird about it. He recognized a cyst, and called Dr. Goodell in to see her. Despite her age, her catamenia were not only regular, but too free. Dr. G. expected to find a fibroid, but the womb measured only three inches, and it was also very movable and wholly independent of a large cyst which filled up the abdomen like an eight months' fetus. The lower edge of the cyst could be felt per vaginam, lying in front of the womb. Percussion elicited all the phenomena peculiar to ovarian cysts. Coronal resonance was marked. There was dullness in front, showing the complete absence of intestines from that region, their presence being alleged to be one of the most trustworthy signs of a renal cyst. As the lady stated positively that there were changes in the size of the tumor, Dr. G. was disposed to regard it more as a cyst of the broad ligament, than one of the ovary.

The operation was performed on September 16th. As soon as the cyst was reached it was ascertained that it was not ovarian or parovarian; but it was fully fifteen minutes before its true character was discovered. The cyst was covered with a very vascular but loose layer of peritoneum, to which, in the lateral regions, the intestines were attached and in which they seemed to be imbedded. This was cut open and stripped off from the whole cyst, which now revealed, on its lower border, an expanded and healthy portion of the left kidney. To confirm the diagnosis, a small calculus was found within the cyst and a much distended ureter discovered. The pedicle formed by this process of enucleation consisted, below the ligature with which it was secured, of the renal blood-vessels enveloped in connective tissue. But to get a button of tissue sufficient to prevent all slipping of the ligature, the operator was obliged to leave on its distal side a small portion of the cyst, but none of healthy kidney.

It was evidently a case of hydronephrosis, but the uterine sound was passed into the ureter and no obstacle was met with; it probably did not reach the bladder. This ureter was brought out at the lower angle of the wound and secured there by one of the sutures. Nineteen days have now elapsed since the operation, and the lady has done uniformly well, and sat up to-day, for the first time.

## Hydatid of Morgagni,

The lady from whom this specimen was taken was operated on by Dr. Goodell, on September 4th, and promptly recovered. The cyst was of the left ovary, but the right one, being also diseased,

was also removed. Attached to one of the fimbriae of the oviduct is a very beautiful specimen of a hydatid of Morgagni. This little body, so often found attached to the ovary, was of interest, because those small cysts of the abdomen which, after obtaining a small size, would burst and usually refill, were, in Dr. Goodell's opinion, cysts of this hydatid.

## Cyst of the Parovarium.

This specimen was taken from a young woman, aged 22. The tumor was first noticed eight years ago. Dr. Goodell aspirated her before the clinic at the University of Pennsylvania, in October, 1880, and November, 1881. On each occasion a perfectly limpid fluid was removed, and the diagnosis was consequently made of cyst of the broad ligament. As the cyst again refilled, she demanded its removal, and she was accordingly operated on before a ward-class, on September 19th. The cyst sprang from the left side, and had the usual delicate and vascular wall. Spread out on its lower border is the corresponding ovary, which could be very readily overlooked by a careless observer. The right ovary being much enlarged, and filled with small cysts, was also extirpated. When first removed, it contained a fine corpus luteum, but the alcohol had dissolved this out, leaving merely the deep pit which held it. The operation was performed just two weeks after her last monthly period. The usual metrostaxis occurred on the fifth day after the operation. The patient is convalescing well.

## Papillomatous Uterine Growth.

Dr. W. H. Parish exhibited two vials containing apparently similar growths, removed from the endometri of two patients, one of which, from concurrent symptoms, he considered benign, but the other he thought malignant. In the first case menstruation had ceased for a year, after which it had returned and become constant and profuse. She had suffered from prolapse, following labor, twelve or fifteen years ago. Dr. Parish dilated the uterus with two sets of sponge tents, after which he introduced his finger and found a number of elevations as large as peas; some of these he removed by means of curettes, and others by seizing them with forceps and twisting them off. Some metritis followed the operation, but no blood has been lost in the last four weeks.

The second specimen was removed from a carcinomatous uterus, by means of the curette and the écraseur.

Dr. Goodell remarked that he did not allow the revelations of the microscope to govern him in his treatment of bleeding uteri. He had under his care recently three such cases, all of which were reported by noted microscopists to be carcinomatous, but one of these cases was entirely cured by local measures.

One case of lacerated cervix, with ectropium and free hemorrhage, which was pronounced undoubtedly cancerous by a microscopist of high repute, was relieved by scraping, and cured by operation. Another case, pronounced cylindrical epithelioma by the same gentleman, recovered after operation.

A patient of Dr. C., while in this city, was re-

ferred to me for examination as to the cause of persistent menorrhagia. Ether was given and a careful and thorough examination made, and the round and sharp curettes were used, but Dr. Goodell could find no cause except a few minute granulations. This class of cases is usually found among stout or plethoric women, and the hemorrhage will recur after any treatment, although temporary benefit can be obtained. When the curette is passed over the walls of the uterus it exercises a tonic effect, and a contraction results, checking the hemorrhage.

Dr. A. H. Smith has had under treatment a number of cases of marked anteflexion, generally in young girls, in whom dysmenorrhea is followed by very profuse menstruation, which proves very exhausting, and will not yield to internal remedies. Examination shows no recognizable cause, but a stem pessary will secure entire relief in a few months. He has seen six such cases within

the last three years. He has had under treatment cases resembling epithelioma of the uterus, in which the introduction of a large sponge tent has resulted in complete cure and secured the cessation of profuse and hitherto uncontrollable hemorrhage.

Dr. Parish: Some cases of incurable hemorrhage are due to inflammatory adhesions of the uterus to surrounding tissues, which will disturb the circulation and modify nerve action. He considers the smooth wire curette a valuable aid in diagnosing the condition of the endometrium as its passage over the uterine wall will distinguish between healthy and unhealthy uterine tissue.

A patient suffering from uterine hemorrhage for three weeks following a possible miscarriage at three months, was cured by one application of the smooth curette, which brought away some granular matter.

## EDITORIAL DEPARTMENT.

### PERISCOPE.

#### Recovery from Traumatic Tetanus.

At a recent meeting of the Cambridge Medical Society, *British Medical Journal*, Mr. Shields related the case of a lad who had recently been treated in the hospital, for tetanus, and recovered. A healthy country lad, aged 17, was admitted on May 30th. He was suffering from an extensive lacerated, contused wound, on the flexor aspect of the left forearm, the result of the explosion of a gun. The superficial muscles were extensively disintegrated; the radial artery was torn away, but the main nerves had escaped injury, and the ulnar artery was intact. The wound was treated by poultices and carbolized oil, and all went well until June 17th, when symptoms of tetanus set in, with slight stiffness about the muscles of the jaws and of the neck. On June 19th these symptoms had become more pronounced; well marked trismus was present, with epigastric pains. By June 23d the disease was fully developed. Severe spasms, especially of the muscles of the back, were constantly present; the tongue was foul, the breath offensive; the bowels were constipated, and the pulse quick; while the temperature was high, and the urine scanty and high colored. Excessive sweating was also present, so that an eczematous condition of the cutaneous surface was produced. From June 23d to July 12th the symptoms were very severe. Marked opisthotonus was observed, and the patient became rather emaciated. On July 10th the disease was on the wane. Gradually the spasms grew less severe; the bowel acted naturally, and the appetite improved, while the patient was walking about the ward, and his wound nearly healed, and all tetanic symptoms were gone. Throughout the whole case, the temperature was, for the most part, above normal—presenting

curious diurnal variations. On several occasions it reached the height of 104° and 105°. The pulse was quick and weak, and varied slightly with the temperature. The treatment adopted depended chiefly upon feeding and nursing. Plenty of good milk and eggs, with port wine and brandy, were frequently administered, both by day and night, and fortunately swallowed and retained by the patient. Hypodermic injections of morphia were administered every evening, and caused relief and some snatches of sleep. The bowels were relieved by enemas; and during their peristaltic action the patient seemed to have his sufferings increased; but after the evacuation the pains were alleviated. He smoked tobacco twice, and this gave him some relief from the accumulation of mucus in the fauces. Dr. Humphry believed tetanus to be a passing malady, depending probably, like smallpox, scarlet fever, and others, upon some blood poisoning; like them being amenable to no known treatment, but, running a certain course and subsiding, provided it did not kill the patient. Of the rapidly progressing cases, very few survived; whereas in those which came on more tardily, and more particularly in those in which the patient continued to be able to take food, a favorable result might not unfrequently be obtained. The disease was attended with much wasting and exhaustion, sometimes with high temperature; and the most important feature in treatment was to give nourishment, which must generally be in a fluid form, milk, eggs, beef tea, wine, etc., as much as the patient can take. While food could be swallowed, there was hope; and it must be urged upon the patient. Sedatives, such as morphia hypodermically injected, tobacco, etc. come in as adjuncts in more severe cases; but reliance should be placed on the feeding, with attention to the bowels, it being commonly necessary to give aperients. In some cases he had

found tobacco, smoked or administered in a mild form, to have a soothing effect. He had kept patients persistently under the influence of chloroform without any benefit. The maintenance of strength by nourishment, so as to enable the patient to tide over the attack, was the great thing to be aimed at.

#### Anencephalic Monster.

At the last meeting of the South Carolina Medical Association (*Transactions*) Dr. A. A. Moore related the following case:—

I was called into the country, December 12th, 1880, to attend Mrs. M., in labor, a primipara, aged twenty-four years. She had been in pain all the previous night, and when I arrived at her house, about 10 A. M., the pain was incessant, although it came in occasional paroxysms of increased severity. The pulse was more frequent than natural, but did not indicate exhaustion, and the respiration was normal. As is often the case, there was constant dribbling of the amniotic fluid from the vulva, and yet the distention of the abdomen did not sensibly diminish. It was unnaturally prominent and rotund, so that there was no projection of any of the bony points of the fetus; and, in consequence of its large size, I began to suspect that I had a case of twin pregnancy to deal with. On vaginal examination, I found the external parts moist, soft, and in a proper condition for an easy delivery. The os uteri was only partially dilated, and what appeared to be the amniotic sac was very tense and unyielding, so that I could not discover even the presentation; I waited two or three hours longer until the os had fully dilated, when I ruptured the sac with my finger, and there was a long and copious gush of water, flooding the bed up to the patient's shoulders, and running down on the floor. Examining again, I recognized the rugged, deformed head of the child presenting. After a few severe throes, a hideous monster was delivered, still-born, a photograph of which is here presented. The frontal bone down to the superciliary ridges, the whole of both parietal bones, and the occipital bone, except the basilar process, were all wanting. In other words, the whole vault of the cranium was absent, there being no visible trace of a brain. A thin fringe of black hair bordered the flat surface of this imperfect skull. There was also complete absence of the cervical vertebrae, the head being firmly fixed upon the thorax. In addition to this there was cleft in the spinal column, immediately below the head, forming spina bifida, into which, and down the vertebral canal, I passed a probe its entire length. The child (a female), though small, was perfectly formed in every other respect. I believe that what was apparently a distended amniotic sac, was in reality a very large dropical effusion of the encephalon, attended by deficiency of the bones, muscles and integuments, and it was this that I ruptured, and that retarded the progress of labor.

The mother of the child is a blonde, very well developed and healthy. On inquiry, I could not trace this deformity to the questionable influence of any maternal impression. The father is twenty-nine years old, of dark complexion, with

black hair and eyes. He has been treated for phthisis, I believe, and has been quite dissipated in his habits. Whether his consumptive tendency, or his besotted life, or both, had any agency in the procreation of this unsightly offspring, I will not attempt to discuss.

In the July number, 1867, of the *American Journal of the Medical Sciences*, I reported an almost exactly similar case, except in that instance there was no fissure of the spinal column, and the cervical vertebrae were present and perfectly formed.

#### Strangulated Hernia in a Woman Aged Eighty-five—Recovery.

Dr. C. A. Owens reports the following case in the *Lancet*:—

On September 23d, 1879, I was called to see M. S., an old woman, aged eighty-five, who was suffering from sickness and constipation. I found that these symptoms had been present for 120 hours, and were due to the presence of a right strangulated femoral hernia. There was a tense, hard, painless tumor in the corresponding region; she had the usual anxious expression of countenance; pulse 75; temperature 101°. The vomiting was not stercoraceous. Having tried the taxis carefully, but without success, I applied an ice bag to the tumor, and tilted up the foot of the bed, which proceeding had enabled me to succeed in reducing a hernia under similar circumstances. Later in the day I again visited the patient, and finding reduction impossible, I administered chloroform to her, with the understanding that if taxis then failed I should proceed to operate without further delay. Taxis not succeeding under chloroform, I operated in the usual way, being obliged to open the sac, and relieving the stricture by slightly nicking Gimbernat's ligament. The bowel was congested, but retained its natural lustre, and was returned into the abdominal cavity without any difficulty. The wound was closed by sutures, and dressed with a pad of lint supported by a spica bandage. The patient rallied well after the operation, and I left her comfortable, with instructions to take an opiate, to procure sleep.

September 24th. Patient cheerful; had rested well without the opiate, which she declined to take, as well as a stimulant in any shape; no pain; temperature 101.5°; pulse 72. 25th. Patient, though uncomplaining, was not quite so well; her temperature had gone up to 103°; pulse 96, and intermittent; no sickness and no tenderness of abdomen. 26th. Patient better; pulse 96; temperature 102°. 27th. Much better; temperature 100°; pulse 112. Bowels had moved naturally without medicine. The patient continued to improve.

October 1st I removed the dressing, and found the wound entirely healed; sutures removed. From this date the patient advanced rapidly to perfect recovery without any untoward symptoms.

*Remarks.*—This case is worthy of notice, on account of the very advanced age of the patient (eighty-five) and the length of time the hernia was strangulated. No credit can be given to opium, as she took none, either before or after the operation; nor to stimulants, for the same

reason, the patient having a decided aversion to their use. She was out in the fields, gleaning, in three weeks, and is alive and well now, at the advanced age of eighty-eight. I was assisted by my partner, Mr. Barton, during the operation.

#### Vaso-Constrictor Nerves.

The *Lancet* says that an elaborate study of the sympathetic nerves which cause the dilatation of the vessels of the mouth and lips has been made by MM. Dastre and Morat. Two years ago they announced the discovery, in the cervical trunk of the sympathetic, of filaments, the function of which is to cause dilatation of the vessels of one region of the head, and thus to antagonize the action of the other fibres of the sympathetic. If the spinal cord is divided in the lower part of the neck, stimulation of the posterior segment causes a primary dilatation of the vessels of a large part of the head, especially in the region of the ear and of the mucous membrane and skin of the nose and mouth. The result is the same in the cat, rabbit, hare and dog, and seems to show that vaso-dilator nerves arise from this part of the spinal cord. If the dorsal nerves, from the second to the fifth, are exposed, divided, and the peripheral ends are stimulated, dilatation of vessels occurs, but in a limited region of the mouth and face, and only in the dog. The result only follows stimulation of the anterior roots. Hence, in this animal, at any rate, the vaso-dilator nerves seem to leave the cord by this path. A similar experiment with the branches from these roots to the sympathetic, gives the same result and conclusion, and may, in like manner, be followed up the cervical sympathetic trunk. Many fibres were traced by the experimental method into the fifth nerve. The course of the nerves being thus ascertained, an attempt was made to excite them by an agent less artificial than electricity. Asphyxial blood is a powerful stimulant to the central nervous system, but it stimulates both classes of vascular nerves, and one or the other effect may predominate. In the bucco-facial region the effect of asphyxia is congestion. If the sympathetic is divided on one side, the congestion is much slighter, sometimes is absent. Hence the asphyxial vascular dilatation must be due, in part, at least, to the influence of these sympathetic fibres. A dilator action may also be excited by reflex influences. Stimulation of the central extremity of the divided vagus, isolated from the sympathetic in the lower part of the neck, causes a primary and bilateral dilatation, which is lessened or prevented by preceding division of the sympathetic. It is also prevented if complete muscular relaxation is produced by the inhalation of chloroform, or if the spinal cord has been divided. It is especially considerable if the stimulation is applied to the superior laryngeal nerve, or to the trunk of the vagus, as far as the origin of the pulmonary branches, but is almost absent when the stimulation is below this point. Bucco-facial congestion may also be produced by excitation of the central end of the sciatic or of the tibial nerve, and probably also of other cutaneous branches. A certain degree of congestion is produced by asphyxia, and by reflex

excitation, after the division of the sympathetic; and when sufficient time has elapsed to permit the degeneration of the nerve fibres, stimulation of the superior maxillary nerve still causes a certain degree of congestion of the corresponding lip. Hence the cervical sympathetic appears not to contain all the vaso-dilator nerves of this region. In this respect the dilator nerves of the vessels resemble the dilator nerves of the iris, which run in part only in the sympathetic trunk.

#### On the Bacteria of Typhoid Fever.

The *Medical Times and Gazette* says that Dr. Ernest Almquist, of Stockholm, who had been assiduously occupied for eight months in proving the presence of a bacterium (microbe) in the living blood in typhoid fever, records in the *Nordiskt Medicinskt Arkiv*, 1882 the conclusions at which he, so far, has arrived. He made these researches on a considerable number of preparations of normal and pathological blood, before coagulation. After coagulation, formations are found in the blood, which are perfectly similar to bacteria, and are probably formed from torn meshes of fibrine. In the blood of persons suffering from typhoid fever, bacteria are frequently found, but very small and very few. Each bacterium has the appearance of a cylindrical, short and slender rod, the extremities refracting light more powerfully than the middle, which appears more transparent. Still more rarely there are found in typhoid fever other formations—as short protoplasmatic threads, or as ovoid grains. On rare occasions he has detected the presence of an enormous mass of bacteria; but only for one or two days, in the whole course of the fever. It is not certain that a greater number will be found in severe than in abortive cases, for in these latter Dr. Almquist has often discovered a considerable number. The bacteria are found most frequently in the second and third weeks. He thinks it necessary to search for pathogenic bacteria at the bedside of the patient, and then they are found in the blood in the purest possible condition. To obtain certain results, pure seeds must be obtained if it is wished to cultivate them or to inoculate an animal with them. Workers have, he says, too much neglected researches of this kind, and they have sought for the bacteria of a patient in the excretions, in the dead body, and even in the earth itself. In the case of typhoid fever much time and trouble are necessary, in order to find a number of bacteria sufficient to cultivate them so as to make them serve for inoculation; but it is worth the trouble, for the harvest, once found, soon gives results. In many infectious diseases it will be undoubtedly very easy to procure them, and perhaps it will be possible to fix the very day when the bacteria will be most frequently found in these cases. It may be presumed that the pathogenic bacteria can be perfectly cultivated in normal blood, especially in that of a person who has never been attacked by the fever. Dr. Almquist has cultivated this bacterium, taken on the eleventh day from the blood of one of the cases described, in a drop enclosed between two glasses, one of which was concave. From this drop there were prepared successively a series of generations, and

from the second generation he succeeded in inoculating a dog, with good results. The animal was hardly ill, but on the fifteenth day he found the Peyer's patches much swollen, and containing characteristic bacteria. Without having yet finished his researches, Dr. Almquist thinks that he is able to form the following opinions, viz.: The bacterium (*microbe*) of typhoid fever is found in the blood only by accident; it vegetates principally in the walls of the intestine, and only in very small numbers in ordinary cases, and, if more are found, he thinks they are thrombi of bacteria, which, having been detached from their places, circulate in the blood, broken into particles. He then describes six forms of bacteria, which are illustrated by microscopical drawings. He thinks, from his researches, that the microbe he describes cannot strictly be classed among the genera *Bacillus*, *Micrococcus*, or *Bacterium*, but that the series of developments comprises the following phases, viz.: The spore shoots forth a thread; several threads form a network, a mycelium, or a zoogloea of threads. If the spores are completely formed in the threads, then the zoogloea of threads may be transformed into a zoogloea of delicate grains. Dr. Almquist has not yet concluded his researches, to which he intends shortly to return.

#### Hypodermic Injections of the Atropia Salts.

The principal physiological effects of administration of the salts of atropia are: dryness of the mouth and throat, dilatation of the pupils; in larger doses, difficulty in speaking and swallowing, numbness of feeling in the face, amaurosis, cephalgia and vertigo, gay or sad delirium; hallucinations, nausea; slowing up and later acceleration of the pulse; scarlatiniform redness of the skin, oedema, etc. When toxic doses are given, besides the symptoms already mentioned, there is aphonia, muscular spasms, collapse, and finally death with arrest of heart in diastole. The toxic phenomena supervene in from two to ten minutes when the drug has been hypodermically injected.

No local accidents are observed after the subcutaneous injection of a solution containing the neutral sulphate or the valerianate of atropia, provided the solution be absolutely pure and contains neither acid nor alcohol. A good solution for hypodermic use is the following:—

R. Atropia sulphat., gr. iss  
Aqua destill., 3 iij. M.

Twenty drops of this solution contains about one-sixteenth of a grain of atropia. Small doses, not more than one-twentieth of a grain (10 drops), should be used at first, and the dose of one-thirtieth of a grain (40 drops) should be rarely exceeded.

In the following prescriptions, morphine is associated with atropine, and good effects are obtained in combating pain and insomnia. The following is a prescription employed by M. Dujardin-Beaumetz:—

R. Morphiae muriat., gr. iss  
Atropiae sulphat., gr. 1  
Aqua lauro-cerasi, 3 v. M.

Fifteen drops of this solution contains one-third of a grain of morphine, and one-twentieth of a grain of atropia. The following solution is employed by M. Gueneau de Mussy:—

R. Morphiae muriat., gr. viij.  
Atropiae sulphat., gr. 1  
Aqua destill., 3 iiss. M.

Fifteen drops, about one gram, of this solution contains one-sixtieth of a grain of atropia and five centigrams, or about one grain of morphine. About four drops will be the proper dose to commence with. This association of atropine with morphine has been recommended by such observers as Brown-Sequard, (1860), Harley, Frankel, Prevost, etc. From a therapeutic point of view, atropia is indicated particularly in neuralgia, asthma, incontinence of urine, constipation, chorea, intestinal occlusion, vaginismus, tetanus, epilepsy, sweating in phthisis, vomiting of pregnancy, etc., but its best effects are obtained in excessive sudation or intense pain.

#### Medical and Surgical Uses of Belladonna and Atropia.

In the *Lancet*, Dr. J. H. Whelan says:—

Without going deeply into physiology, let me briefly summarize the evidence of cardiac inhibition, its causes, and the effects of atropine.

1. If we send an interrupted current into the exposed vagus of an animal, after an initial latent period (which is .16 of a second in the rabbit, according to Donders), the heart stops beating and remains in diastole.

2. If we give a dose of atropine before applying the electrodes, no such thing takes place.

3. The application of muscarin or pilocarpine seems to produce profound cardiac inhibition, which a small dose of atropine removes.

4. Nicotine paralyzes the cardio inhibitory vagal fibres, after first stimulating them, while atropine seems to have an effect on the heart itself as well. The results of experiments teach us that the hypodermic injection of atropine before chloroform inhalation may ward off death itself. In some extreme cases of hysteria or allied disorders, we have patients going from one faint into another; frequent syncopal attacks. In the allied abnormal condition of pregnancy, that called by old authors *hypothœnia*, we have the same condition. In both, this drug ought to prove extremely useful. In the former we have impulses originating probably in the higher centres, causing frequent inhibitions; in the latter the uterus takes the place of the brain. I once saw a very interesting case under Surgeon Hamilton, in the County Meath Infirmary. A man was brought in suffering from slight localized abdominal tenderness and obstinate constipation. The pain increased, and the pulse became very weak and fast, while the constipation continued, in spite of many remedies. He was ordered a grain of extract of belladonna every hour. After the second dose the pulse had improved wonderfully, and assumed the normal type in all characters. He got ultimately worse and died, when a perforating ulcer of the pylorus was found. Leaving diffi-

cult explanations aside, I think we have in the deadly nightmare a means by which we can prevent persons from fainting. By the hypodermic use of atropia the surgeon may remove the effects of the shocks of gigantic wounds of railway accidents and battle. I remember a hysterical girl in whom I at different times opened a minute abscess and removed two dental stumps. By each little operation she was caused to faint several times. Finally, in the last instance, before using the instrument, she was given twenty-five minimis of tincture of belladonna, with the result that she did not faint, neither did she manifest any signs of weakness. If, then, as it seems, we are in possession of a drug which will prevent cardiac inhibition, cases of "death from shock" ought to fade from the death register of surgical practice. Belladonna will be found sometimes serviceable in nocturnal emissions, when these are accompanied by erections.

Dr. Gentilhomme, of Reims, has used a pill containing  $\frac{1}{100}$  of a grain of sulphate of atropine in coryza, with marvelous results. Fifteen minutes after the first administration all sneezing had ceased, the secretion stopped and respiration became normal.

## REVIEWS AND BOOK NOTICES

### NOTES ON CURRENT MEDICAL LITERATURE.

—Dr. V. H. Taliaferro, of Atlanta, Georgia, gives further evidence of the value of systematic pressure in uterine disease, in a reprint of 20 pages, before us. It is well worth the careful perusal of gynecologists. The author will supply copies.

—In a reprint from the *Archives of Ophthalmology*, Dr. Julian J. Chisholm, of Baltimore, narrates two interesting cases, one of cataract extraction with iridectomy, in an infant only six months old, the other of congenital paralysis of the sixth and seventh pairs of cranial nerves, in an adult.

—The Medico-Legal Society of New York has got into a row about publishing its Transactions, and the Treasurer, Dr. E. C. Harwood, has come out in a pamphlet of 32 pages, explaining why he declines to pay the printing bills. Doctors never did get along well with lawyers. Of course, we believe the doctor is in the right.

—The value of a bandage and compress in present or threatened mammary abscess is extolled by Dr. Geo. H. Noble, of Atlanta, in a reprint from the *Atlanta Medical Register*. The measure is undoubtedly a useful one, but it is by no means so new as Dr. Noble seems to think. It is frequently mentioned in German gynecological works.

## BOOK NOTICES.

**The Treatment of Diseases by the Hypodermatic Method.** By Roberts Bartholow, M.A., M.D., etc. Fourth Edition. Philadelphia: J. B. Lippincott & Co., 1882. 1 vol., 12mo, pp. 365. Cloth, price \$2.00.

The author, in his preface, makes an appeal in favor of the substitution of the form hypodermatic for the more usual hypodermic. The former has the authority of Aristotle, and is more consonant with the rules of derivation in Greek Grammar. The revision of the text has been thorough, and the additions amount to 114 pages. A careful survey and estimate of all the recent accessions to the literature of this therapeutic method are presented, and probably there is no other monograph on this subject, in any language, which is so complete. The method is one of the greatest value when properly used. By no other means can we produce equally prompt and pleasing results. The hypodermic syringe is now, to the intelligent practitioner, as indispensable a part of his personal equipment as the lancet was fifty years ago.

**Fistula, Hemorrhoids, Painful Ulcer, Stricture, Pro-lapsus, and other Diseases of the Rectum, their Diagnosis and Treatment.** By William Allingham, M.D., etc. Fourth revised edition. Philadelphia: P. Blakiston, Son & Co., 1882. 1 vol., 8vo, cloth, pp. 168. Price \$1.25; in paper, 75 cents.

This excellent monograph has had a just popularity, and the author has in the present edition availed himself of his more extended experience, to add materially to its value. It is, indeed, probably, the most satisfactory treatise extant in its peculiar field.

**On Asthma, its Pathology, and Treatment.** By Henry Hyde Salter, M.D., F.R.S., etc. William Wood & Co., New York.

The above is the September number of Wood's "Library of Standard Medical Authors." Dr. Salter's work has not previously been republished in America, although for many years in England it has been a popular monograph. It is, to be sure, not very well "up to the times." Several of the new remedies in asthma which we have looked for in its index are not mentioned. But as a meritorious exposition of the older methods of treatment and pathology it still has solid value.

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**A PHYSICIAN'S DUTY TO HIS PROFESSION.**

"Every professional man," says Lord Bacon, in an oft-quoted passage, "owes a debt to his profession." We say this is an oft-quoted passage, but we doubt if its exact intention is often thought over.

Bacon, no doubt, was reflecting that the professions occupy the honorable positions they do, solely through the labor that has been bestowed upon them by our predecessors in them. The fruit of this labor we inherit on entering a profession; we, therefore, are morally bound to add something to the general mass of learning, which bestows its dignity on our profession.

No one has a right to practice medicine, for example, solely to get a living: not even ought he to do it solely for benevolent purposes, though we know no one who is open to this charge. While it is a business, and is to be treated as such, every physician should feel that duty demands from him that he add something to the general stock of medical knowledge. We can do this in many ways.

With the numerous societies that are now organized, he can always share the best results of his experience with appreciative colleagues. With a medical press as active as ours, if he has any taste for writing, he can always address a large audience through the columns of a journal. In many States, the State Medical Society, or the State Board of Health, are always desirous of information on local diseases and medical climatology, on vital statistics and domestic hygiene.

No matter how remote from the centres of professional labor he may be located, no matter how limited or monotonous may be the circle of his observation, every physician could, if he would, and studied how to do so rightly, add materially to the fund of scientific knowledge.

Suppose such a one was to review all the features of his locality, geological, topographical, meteorological, botanical, hydrographical, and having grouped them properly, endeavor to find out how they affected longevity, the general health, the course of common diseases, the production of uncommon ones, the progress of epidemics, etc. We care not where such a study were made, if judiciously carried out, it would be read with profit by physicians in every part of the world.

Goethe has said that the secret laws of all vegetable growths are illustrated in the humblest weed. This our profession may say: that within the purview of every one of its members is enough to keep him busy, with profitable study, for life.

Let no one complain, therefore, that he has no chance to find out anything new; that his "opportunities" are too narrow. It is not the opportunities that are at fault, it is the capacity to utilize them.

Professor Virchow said, in one of his lectures, that of ten medical students to whom he would show a pathological\* specimen, nine could not see it. That is, they could not understand its bearings and significance. He justly deplored this absence of the faculty of observation. But the absence is not irremediable. If a man sets about it with right good will, he can overcome any such deficiency. Inertness, narrowness of view,

routinism, indifference to higher motives, these are the foes of most serious power.

We urge, therefore, those who feel this lethargy creeping upon them to resist it. Especially is it destructive to young men. They should determine not to grow rusty; they should always cherish some purely scientific part of medicine; they should make it a rule to read a new book, and to write an article for a society or journal, every few months. Thus they will avoid the fatal mental dry-rot that attacks so many.

#### THE ADVANTAGES OF COUNTRY LIFE TO LITERARY MEN.

It is a significant and noteworthy fact that many of the greatest lights of the literary world have resided in the country. It is a universally admitted fact, by those competent to judge, that a residence away from the centres of commercial activity, in other words, a suburban residence, is most conducive to physical health. So, it would seem, is it to the mental health and activity of man. That this should be so, is not to be wondered at, when we remember that it requires a *sound body* to enclose and develop a *sound mind*. But independently of the correlation of physical and mental force, aside from the influence that a healthy body has on mental activity and fertility, there are other reasons why country residence is calculated to be beneficial in an especial manner to the literary worker.

Continuity of thought, in the first place, is very essential to literary progress. If a man desires to accomplish a certain problem in psychical life, it will require a certain time, according to the rapidity with which he is capable of performing mental labor. If a man starts out to walk a given distance, it will require a certain time, according to the ability he possesses for walking. If, now, in either pursuit interruptions occur, the accomplishment of the proposed task will be delayed, just in proportion to the number and duration of these interruptions. In the ever changing panorama of city life, in the almost inevitable and numerous demands upon the time of a resident of a large city, from one source or another, the

absence of such interruptions is well nigh impossible.

In the second place, communing with nature and all its wonderful works certainly does have a refining, elevating and purifying influence on the thoughts that may have been suggested by more worldly surroundings.

It is true that the surroundings and necessities of city life bring up to the mind subjects for consideration, but the country is the place in which to elaborate and perfect them.

This idea is carried out by experience.

The country air of Gad's Hill enabled Dickens to perpetuate his wonderful pictures of metropolitan life.

The pure air of small New England villages has enabled our great American poets to sing the songs of beauty that will make their names forever revered; while it was stated at the recent meeting of the British Medical Association, that some of the greatest elements of progress in our profession had been contributed by country doctors; indeed, the very founder of that time-honored institution was himself a provincial physician.

Thus, then, while the crowded city offers peculiar advantages to the commercial spirit, while therein money can be best accumulated, yet the higher type of manhood, the lover of thought, he who ponders that he may by so doing benefit and advance his fellow men, will find the best pasture upon which to browse his noble aspirations in nature's sweet and pure country.

#### ONE OF THE DIFFICULTIES OF JOURNALISM.

Readers of a journal like ours expect to get all the latest medical news. Whatever may have been detected new in the wide field of medicine, if it is in England, France, Germany, Italy, Russia, or anywhere else, a subscriber to a medical journal expects his to be the first communicating the latest facts. But very few have an idea how many foreign journals have to be read through, and what the difficulties are under which an editor of a medical paper labors. The Russian physicians, for instance, are of late making rapid progress, and we have often already re-

ported interesting cases, directly translating them from Russian journals. But that this is not an easy work, that their language is a very difficult one, we want to give our readers some little idea, by simply mentioning the *titles* of a few Russian medical journals which are at the disposal of the editor of that branch in our paper:—

“Westnik Sudebnoi Medizini and obsohtsche st wennoi Gigieni” (Messenger of forensic Medicine and public hygiene).

“Wratschebnija Wjedomosti” (Medical Paper).

“Ljetopisny Moskooskayo chirurgitscheskago Obt-chestwa” (Annals of the Moscow Surgical Society).

“Ieschenrdjelnjaklinitschezkaja Gazetta” (Medical Weekly Gazette).

“Wratsch” (Physician), a journal which has a very large circulation.

“Medizinski Sborink Imperators kawo Kawkas kawo Medizins kawo Obschetschestwo” (Medical Messenger of the Imperial Kankas Medical Society).

#### DRUG FARMS.

In a recent issue of a prominent English medical journal there appeared a short notice on this subject, which we read with interest.

It is a well known fact that our country is over-stocked with physicians, hence we see so many young, bright, well educated and thoroughly competent doctors struggling and starving, almost, along the narrow, crooked and rugged path that leads to professional success. Some of these gentlemen possess, or at least, can command, some small amount of capital, and land, even near our large cities, somewhat remote from railroads, can be bought at a very low price and on very easy terms. There are many articles in our *materia medica* that can be raised in the climate of our country in the open air, and many others that could, no doubt, be successfully cultivated in hot houses.

The profit on drugs is very large, so that very little ground, if used at all successfully, would yield a very large revenue.

Would it not be well for some of our young men to turn their intelligence into this channel?

Their leisure could be devoted to study, while they might be enabled to make a good living, at least until they had attained that *age* so essential to success in the practice of our profession, if they did not care to permanently engage in such a pursuit.

#### NOTES AND COMMENTS.

##### To Detect *Bacillus Tuberculosis*, for Diagnosis.

Dr. Heneage Gibbes recommends, in the *Lancet*, the following process, which will bring out the bacillus with ease and certainty, and in his hands has never failed. The colors used are magenta crystals and chrysoidin; the latter is a brown, which does not stain the ground substance so intensely as vesuvin. They can be procured from the Badesche Anilin Fabrik, 22 Bush-lane, Cannon-street, E. C. The following are the formulæ he has used: Two grams of magenta crystals, three grams of pure anilin, twenty cubic centimetres of alcohol, specific gravity, 830, twenty cubic centimeters of distilled water. Dissolve the anilin in the spirit and then rub up the color with it, in a glass mortar, adding the spirit gradually until it is all dissolved; then add the water slowly, while stirring, and keep in a stoppered bottle. Make a saturated solution of chrysoidin in distilled water and add a crystal of thymol to make it keep; a dilute solution of nitric acid (Coml) is made, one part of acid to two of distilled water. For sputum the following process is the most simple. Spread a thin layer on a cover glass and let it dry; when quite dry pass it two or three times through the flame of a small Bunsen burner and let it cool. Filter two or three drops of magenta solution in a watch glass; place the cover glass with the sputum downward on the stain, taking care there are no air bubbles under it. Let it remain for fifteen or twenty minutes, then wash in the dilute acid until all color has disappeared; remove the acid with distilled water, when a faint color will return; then place the cover glass, in the same manner as before, on a few drops of chrysoidin filtered into the bottom of a watch glass, and let it remain a few minutes until it has taken on the brown stain; wash off the superfluous color in distilled water and place the cover glass in absolute alcohol for a few minutes; remove and dry perfectly in the air; place a drop of Canada solution on the cover glass and mount. It is better to use small glass funnels for filtering the stains, as they protect the fingers. Sections of hardened tissue are treated

in the same manner, with the necessary modifications. With regard to the powers required to examine these bacilli after they have been mounted by this process, an ordinary  $\frac{1}{2}$  inch with daylight will show them perfectly, and a  $\frac{1}{2}$  dry glass will show that they are rows of spherical bodies, with the same illumination. Their diagnostic value remains to be settled.

#### Therapeutics and Physiology.

Dr. Geo. F. Yeo concludes an address in the *Lancet* on "Experimental Physiology and Practical Medicine," as follows:—

Rational therapeutics must grow out of physiological knowledge, as surely as a plant is the outgrowth of its roots. As the remote rootlets are the exact parts which are all important for the nutrition of the plant, so experiment feeds physiology, and thereby nourishes the art of medical practice. It would appear silly to ask to what rootlet any single fruit or flower on a widely-spreading tree owed its existence or nutrition, and so it is idle to expect that each, or even any, therapeutic agent or method of diagnosis should be traced to the definite experimental discoveries that may have led to its adoption or use. As the branches of our medical tree spread wider and wider, and its diagnostic flowers and therapeutic fruits become more and more numerous, we find that its physiological roots go deeper and deeper, in search of pabulum, and the experimental rootlets become still further removed from the more obviously useful and prolific part of the plant.

#### A New Remedy for Spasms.

The *Med. Central. Zeit.*, of July 15, 1882, publishes the result of experiments instituted by Dr. Schiffer, of Berlin, for the purpose of determining the therapeutic value of the extract of *Guachamaca*, a tree indigenous on the Apuche mountains. As a specific for all spastic conditions of the motor apparatus we so far possessed, in reality, one remedy only; curare, which, however, on account of its danger, and the uncertainty of its action, as well as of the remedy itself, has mostly been used for physiological experiments alone, and, perhaps, occasionally in tetanus.

*Guachamaca* extract, prepared from the bark of the *Quebracho* plant, which belongs to the same class as the *Oleander* (*Nerium ol. L.*) and of which latter the skin between tree and bark is also poisonous, is a remedy which, while not so dangerous in its effects, is far more reliable and uniform in its action, and can besides easily be

procured pure and genuine, and of always equal strength, as it is by no means rare.

Schiffer experimented with this drug, and made his observations in the clinic of Prof. Frerichs. He employed the remedy in solution, in the dose of  $\frac{1}{2}$  of a grain, and by the hypodermic method, in cases of tonic and clonic spasms of the muscular system, and always with a very good effect. He noted also that, administered internally, no matter in what solution, the drug was as little absorbed by the mucous membrane of the alimentary canal as curare is.

Should further trials with this remedy prove invariably as successful, or at least frequently so, as was the case in Schiffer's experiments, we would at last possess a reliable specific for all spasmodytic affections of muscles and motor nerves, a drug, the physiological action of which would be exactly opposite to that of strychnine and similar remedies.

#### Turpentine for Taenia Solium.

In the *Southern Clinic*, Dr. H. L. Harris relates the case of a mulatto girl to whom he gave on a Thursday afternoon—

R. Ol. terebinthine,  $\frac{3}{2}$  ss  
Ol. ricini.  $\frac{3}{2}$  iss. M.

Sig.—Tablespoonful at a dose.

And directed that one dose be taken, and that the patient retire fasting, and await developments until one o'clock Friday.

At 12.20 o'clock, Friday, he was summoned, and found she had passed a monster tapeworm, measuring seventeen and a half feet in length, careful measurement. She suffered from soreness over the hepatic region, but the abdomen has fallen, and the patient feels well.

#### Tuberculosis of Urinary Apparatus.

Mr. Reginald Harrison reports, in the *Lancet*, a condition of affairs occurring in a patient in the Liverpool Royal Infirmary, to which the term "Urinary Pathosis" has been applied. He had seen a good many instances of it in hospital practice, the patients being usually sent there on the suspicion that they were suffering from stone. The symptoms of urinary tuberculosis so closely resembled those of stone that an examination of the bladder with the sound was unavoidable. Under all circumstances it was necessary that such an examination should be conducted with the greatest gentleness and delicacy. This condition consists essentially in tubercular deposits and ulcerations of the urinary organs, while similar deposits usually exist elsewhere throughout

the body. In connection with the diagnosis, Mr. Harrison directs attention to the great value of careful and continued thermometric observation. In the irritability which accompanies stone in the bladder and tumors, an evening rise in temperature is only met with under very exceptional circumstances, it cannot be said to be symptomatic of these affections; while in urinary tuberculosis it is constantly observed, and is to be regarded as an objective symptom of importance.

#### Paris Health Report.

At a recent meeting of the Soc. Méd. des Hopitaux (August 11th), M. Ducastel read the report on the reigning diseases for the second quarter of 1882. The mortality is much higher than that for the same quarter for several years past. Typhoid fever and diphtheria have cruelly stricken both the hospital and civil population. Pulmonary diseases have been more common and of greater gravity than usual. In the hospitals 378 cases of diphtheria have been received instead of 237 for the same period last year; in the city outside the hospitals 728 cases were reported, instead of 523 noted last year; the disease was of exceptional gravity, the mortality being as high as 70 per cent. During the month of June typhoid fever was exceedingly prevalent, and during the quarter 452 cases were received in the hospitals; in the city 192 deaths from this disease were reported, instead of 97 for the same period in 1881.

#### Therapeutics of Tetanus.

Dr. James R. Wallace furnishes, in the *Lancet*, statistics of tetanus in the Medical College Hospital of Calcutta, from which we note that after revising the notes in forty six of the cases in which recovery took place, he fails to find one in which success can be attributed to any single remedy, or any individual plan of treatment, though in most of them chloral and cannabis indica were more largely used than other drugs. The practice in which surgical operations were performed for the relief of the sufferer has been attended with most unfavorable results. In two cases the sciatic nerve was stretched for tetanus arising from wounds of the foot; in one instance the median was subjected to the same operation, for disease originating in a comminuted fracture of the thumb, and in neither of these cases did abatement of the spasms or other improvement in the patient's condition attend the procedure. Amputation of the hand

in two cases, of the forearm in three, and of the leg in two, was resorted to without effect. And he concludes that if any drugs are to be relied on, favor is decidedly on the side of chloral, opium in the form of morphia, and opium smoking.

#### Multiple Myom of the Neck of the Uterus.

On the anterior lip of the uterus of a woman, 49 years old, a tumor the size of a walnut, and on the posterior lip, one of the same character, of the size of a hazel nut, was detected. The case is reported by Dr. v. Rabenan, in the *Berl. Klin. Wochenschrift*, 1882, N. 11, and is especially interesting, as every indication pointed to a malignant growth, and only a trial excision proved the benign nature of these tumors, both being myom. For their radical removal the neck of the uterus was amputated.

Another point of interest in this case, and one which, under similar circumstances, may have not a little weight in deciding the diagnosis, is the fact, that the mother of the patient had been operated on several times, for submucous myomata, which in her case had all been provided with pedicles, and this had made the diagnosis easier. Such cases are, on account of their favorable prognosis, and because they might easily be taken, at the first glance, for malignant tumors, of great importance, a myom possessing sometimes almost the same hardness to the touch as a cancer.

#### Excision of the Tongue.

Mr. Croly, of Dublin, performs the following operation for cancer of the tongue, even when the disease is situated in the anterior portion of the organ. He first ligatures each lingual artery close to the hyoid bone, through a curved incision, reaching from the symphysis down to the hyoid bone, and up and back to the angle of the jaw. Through these incisions he withdraws the tongue, as in Regnoli's operation, and removes the requisite amount of it by the benzoline cautery. Lastly, he divides the gustatory nerve where it lies along the inner border of the jaw-bone.

#### Therapeutics of Chloral Hydrate.

In the course of an article on this subject, in the *St. Louis Medical and Surgical Journal*, Dr. Joseph E. Harris recommends chloral for seasickness, 15-20 grains every four hours; for the nausea and vomiting of pregnancy, in inflammations, eruptive fevers, etc., especially when at-

tended by adynamic symptoms; in cholera and cholera morbus, in nearly all nervous disorders, in delirium tremens, in puerperal eclampsia, in infantile convulsions, in tetanus, in whooping cough and spasm of the glottis, and concludes with the statement that hydrate of chloral is a nervous sedative, carminative, hypnotic, an anti-spasmodic, antiseptic, antiphlogistic, and we may say anaesthetic; but gives the following caution: It should be prescribed with the greatest caution, if at all, when there is ischaemia of the arterial system. It should not be prescribed, for instance, in pneumonitis, in which there is bound to be a great disturbance of the pulmonary circulation.

#### Stenography for the Blind.

Prof. Arnold, the Director of the Berlin Institute for the Blind, has at last succeeded in teaching stenography to the blind. He presented, in a meeting of savants, held in Berlin during last month, a boy, at 13, born blind, who was able to write a lecture down about as fast as an expert writer with the perfect use of his sight can do, when making use of common letters. He then read, just as fluently, what he had written. The lecture was on political subjects, and included a geographical description of Greece; for an expert stenographer with undisturbed vision, even, a rather difficult task. Herewith is, at last, solved a difficult problem. Prof. Arnold mentioned, also, that he found less trouble in teaching the blind this system than the common method of writing, and that especially a great deal of time was saved and a new source of income opened to those unfortunate persons who were born blind.

#### Rupture of the Uterus.

Dr. Macdonald presented to a recent meeting of the Toronto Medical Society (*Canada Lancet*) a uterus in which rupture had occurred during labor. The woman, a primipara, was unmarried, aged 26, and healthy. The pains were moderate. During the prevalence of a rather severe pain she felt something give way. The pain ceased, moderate hemorrhage occurred, and there was tenderness over uterus. Collapse rapidly set in, hemorrhage profuse. Examination revealed a rent in anterior wall of uterus, through which the hand readily passed into the abdominal cavity. Ether and ergot were given subcutaneously. Delivery was effected by turning. Child dead. The woman rallied somewhat, but died thirty-nine hours after the rupture. A large quantity of fluid extract of ergot and five drachms

of ether and brandy were given subcutaneously. The rupture was seven inches long.

#### Subcutaneous Injections of Iodoform in Syphilis.

Dr. Thomann, of Gra'z (*Med. Wiss.*, Oct. 1881), has treated several cases of intense syphilis by hypodermic injections of iodoform, and generally after ten or twelve such injections, has obtained a notable amelioration of the symptoms. The preparation he uses consists of six parts of iodoform dissolved in twenty of glycerine; of this from five to twelve drops may be progressively injected. He has never observed an abscess, but slight swelling and pain may occur at the point where the needle penetrates. Iodine is detected in the urine within two hours after the injection, but no odor of iodoform can be found in the respiration, urine, or cutaneous perspiration. Dr. Thomann has also used a solution of iodoform in olive oil, but found it much more irritating than the other.

#### Ergotin for Prolapsus Ani.

A boy, at 5., suffered two years from this complaint. After each act of defecation the bowel prolapsed, 5-7 cm. The treatment instituted was first the usual one: cold effusions, cauterizations with nitrate of silver, the application of the tincture of the chloride of iron, and the internal use of tonics, besides regulation of the diet and attention to the secretions, especially preventing constipation. But the morbid condition continued more or less invariably the same. At last a suppository was made use of, consisting of ergotin, 2 to 3 grains, and of butyrum cacao q. s. The country practitioner who reports this case, in the *Arch. d. Pharm.*, June, 1881, remarks that the effect of this remedy bordered almost on the miraculous; after the application of a few suppositories, the ailment was cured.

#### Eczema and Vaccination.

Dr. J. Herbert Stowers reports, in the *Lancet*, the case of a child in whom eczema commenced at three months of age, in consequence of which vaccination was postponed. When two years old it was seized with confluent smallpox and only recovered to be permanently afflicted with terrible facial deformity. Five other members of the same family who remained in the house throughout this child's illness were unaffected. They had been successfully vaccinated. He furnishes this case as a warning to physicians not to allow eczema to stand in the way of vaccination.

**Atropin for Dribbling from the Mouth.**

Dr. G. F. Yeo says, in the *Lancet*, that often, in cases of paralysis, and sometimes in fracture of the skull, dribbling from the mouth is a most distressing symptom; it saturates the pillow and robs the poor patient of much needed sleep. A little atropin injected under the skin in the neighborhood of the gland, checks for hours the flow of saliva and enables the sufferer to enjoy a quiet sleep.

**Over-distention of the Stomach.**

Dr. Langmann reports, in the *New York Medical Journal*, the case of a man who was troubled with dyspepsia and occasional severe cardialgia, during which time the peristaltic action of the stomach could be plainly seen. The capacity of the stomach was five quarts; the introduction of a tube was invariably accompanied by vomiting. After once washing out the stomach, immediate improvement took place. There are several similar cases recently reported.

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**SPECIAL REPORTS.**

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**NO. X.—OPHTHALMOLOGY.**

BY CHAS. S. TURNBULL, M.D.

(Continued from page 277).

**Serious Effect of Calomel upon the Eye.**

F. C. Hotz, M.D., of Chicago (*Archiv. Ophthal.*, Vol. xi, No. 1). In November, a railroad employé, aged thirty-eight years, consulted me for an affection of his right eye, which resembled, in every feature, an extensive burn of the ocular conjunctiva. The eyelids were red and swollen, especially the upper one, so much so, that the eye could be opened but very little. The conjunctiva of both lids were very red, succulent and roughened by enlarged papillæ. The retro-tarsal portions of the conjunctiva protruded in two thick, succulent folds when the lids were everted; and the ocular conjunctiva was also in tensely red and swollen, so that its limbus projected considerably over the surface of the cornea. But what attracted my attention the most was a large, white crescent in the lower half of the ocular conjunctiva; its convex border reached down to the lower retro-tarsal fold; its concave border was parallel to and about 4 mm. from the margin of the cornea. The horns of this crescent extended upward around the sides of the cornea, and tapering off gradually, terminated in sharp points in the upper half of the eyeball. The surface of the crescent was markedly depressed below the level of the surrounding conjunctiva,

and exhibited the whitish, dry, bloodless appearance of mortified tissue, which we usually find after a severe burn of the conjunctiva.

The lustre and transparency of the cornea were not disturbed; the iris, however, was discolored, the pupil was contracted, and dilated very irregularly, under the influence of atropia, on account of numerous fine synechiae.

Upon inquiring into the origin of this peculiar affection, I received the following information: The patient's habits always had been very regular; he never had gonorrhœa or syphilis, and never had sore eyes.

The present trouble began two weeks ago, without any known cause, with swelling of the eyelids, redness of the eyeball, photophobia, profuse lacrimation, and some pain in and about the eye. He took some medicine internally (which, according to the prescription, contained quinine and morphine), but no medical application of any kind was made to the eye until two days ago. On that day his physician prescribed powdered calomel, which the patient's wife dusted into his eye by means of a camel's hair brush. He could not say how much calomel was thrown in the eye, but the application caused considerable pain, increased the flow of tears, and the tumefaction of the lids, and on the next morning his wife discovered on the eyeball a large white patch which, as she very positively asserted, was not there when she applied the powder on the preceding day. Under proper treatment, the iritis subsided quickly, and after the elimination of the eschar the extensive defect in the ocular conjunctiva was closed by cicatrization. At the expiration of three weeks the eye had recovered a normal appearance, with a regular and mobile pupil; the only evidence of the past trouble was a callous white scar in the ocular conjunctiva, below the cornea, with linear extensions around the sides of the cornea.

*Remarks.*—From the history of this case it is evident that originally the trouble was an acute iritis, with an unusual degree of chemosis. Upon a grave error in the diagnosis, calomel was prescribed, and its local application was followed by the lesion in the ocular conjunctiva so directly that the existence of a causal relation seems very probable. If the patient had been taking iodide of potassium, there would have been nothing remarkable in the unusually violent action of the calomel; for we know that under these circumstances it is converted into iodide and bichloride of mercury. But, as the patient had only taken a quinine mixture, I suspected the calomel was not chemically pure, the more so, as it was not

obtained at a first-class drug store. The chemist who examined the calomel for me reported the presence of considerable free hydrochloric acid; and to my further question as to the chemical changes such calomel might possibly suffer in contact with the lachrymal fluid, he replied that at the temperature of the human body chloride of sodium can convert a little calomel into bichloride of mercury, and that this alteration is greatly favored by the presence of free hydrochloric acid. The production of corrosive sublimate, of course, explains the caustic effect. When the calomel was dusted in the eye, I think the cornea was probably turned upward, and the powder was sprinkled on the lower portion of the chemotic ocular conjunctiva, and afterward rubbed into it by the pressure and movements of the swollen eyelids. This would account for the fact that the cornea escaped unscorched, and that the caustic action was most severe upon the more dependent portion of the ocular conjunctiva.

**Two Cases of Malignant Tumor of the Sphenoidal Cavities, Implicating Vision.**

(*loc. cit. p. 52*) Julian J. Chisolm, M.D., Baltimore. Within eighteen months two cases of malignant disease, supposed to have originated in the sphenoidal cells, have come under my observation, making four cases of this serious lesion which I have seen in the past ten years. In both of these last cases the disease seemed to have started on the right side of the bone, at the base of the skull. The eye complication was recognized as of post-ocular origin, and the lesion was located about the Sella Turcica, on account of the ophthalmoscopic appearance of the discs and the disturbed action of the eye muscles. In both cases the left eye became secondarily involved, both as to the functions of the optic nerve and the action of the muscles moving the eyeball. In each case the nose implication was subsequent to the eye trouble. The first action of the growth in its malignant development was to invade, by bone expansion, the optic foramen at the apex of the orbital cone, and impress the structures passing through this opening, then slowly involving contiguous parts, until both sides of the skull about the median line became affected. In both cases progress was slow, requiring many months for development. In each, treatment was unavailing to stop the steady growth of the disease, until one succumbed to the general poison, and in the other, life seems to be rapidly ebbing away amidst severe torture, which morphia in large doses and frequently repeated can scarcely miti-

gate. One case was in a boy 7 years of age, the other in a member of the medical profession aged 37 years.

While the two cases have this in common, viz., a malignant growth at the base of the skull, destroying sight, then developing in the direction of the face, filling the eye sockets, pushing out the eyeballs, invading the nares, and exhibiting a striking similarity in the disfigurement produced, there are symptoms peculiar to each. The youth suffered no pain whatever when the disease was making rapidly fatal progress; the older patient, on the contrary, has suffered severely from the very beginning of his trouble, and the intense agony of his every-day life has shown no mitigation. The younger case commenced with nausea and vomiting, with headache, before any other symptoms could be detected. When attention was called to the eye, for the rapid deterioration of sight, the cerebral symptoms of nausea and headache suddenly passed away. They did not return, although for sixteen months the disease, in its anterior development, filling up the face cavities with its cancerous growths, steadily progressed to a fatal issue. In the elder the nausea with vomiting appeared among the last symptoms, when sight had already been nearly destroyed, and when prominent growths were developing in the temple and in the roof of the mouth. In both cases the mind remained clear throughout. In both the disease extended from the right to the left side. In neither case was there any general paraparesis nor any evidence of extensive encroachment by the growth in the direction of the cranial cavity. The loss of smell was secondary to that of sight in the youth, while it was retained in the older case, even when the disease had invaded the left orbit and had reduced vision in this eye to recognition of large objects, sight in the right having been utterly destroyed by pressure on the optic nerve. The youth suffered from an external squint with ptosis, the older with internal squint followed afterward by ptosis. In both the drooping of the lids of each eye became prominent.

A little more than a year after the time of the boy's first visit to Dr. Chisolm, he received a letter from his family physician, announcing the death of the boy. From this letter the following extracts were made: "Death apparently came from exhaustion and septic poisoning. The eyeballs protruded excessively, in hideous deformity. Bleeding, fungous masses protruded from each nostril, and also could be seen behind the palate. These emitted a most offensive odor.

His hearing was only implicated a few days before his death. The most wonderful part, to me, was the total absence of all pain. I was not able to make a *post-mortem* examination."

#### Tumor of Lachrymal Gland.

By Joseph A. White, M.D. (*loc. cit. p. 62.*).

As tumors of the lachrymal gland are not very common, these few notes from my case book, in relation to the successful removal of such a growth, may be of some interest.

Mrs. E. Pye, a German lady, 60 years of age, has had a gradually increasing swelling at the outer part of the left upper eyelid, for more than a year. Of late its increase has been more rapid, the eye being pushed down and toward the nose, so that it is now (May 1, 1881), difficult to close the lid over it. At times the eye is quite painful and tender to the touch, is inflamed, and has a constant muco-purulent discharge.  $V = \frac{2}{10}$  both eyes, with  $+\frac{1}{2}$ . R.  $V = \frac{2}{10}$  with  $+\frac{1}{2}$ . L.  $V = \frac{2}{10}$ . Ophthalmoscope shows left optic nerve to be quite reddened, with hazy outline and large tortuous veins.

The case was evidently one of lachrymal gland tumor. On May 13th I removed the tumor through an incision made along outer third of edge of orbit, just below the brow. It was dissected out with probe-pointed bistoury and scissors. It was firmly attached above to the periosteum and below to the conjunctiva, and extended far back into the orbit, pressing upon the optic nerve. It was removed intact; was ovoid in shape, measuring one and a quarter inches in its length, and three-quarters of an inch in its transverse diameter.

Very little bleeding followed the operation. The wound was closed by stitches, leaving a small drainage tube at outer angle.

Though there were considerable ecchymosis and swelling of the eyelids and cheek, it healed kindly, and required little after treatment. Three weeks later it was entirely healed; the eye had returned to its position, its movements were free, the vision the same as before the operation, and the lid drooped slightly.

It is now six months since the tumor was removed, and the most careful examination can detect no signs of a recurrence; the eye and lids are perfectly normal, both in appearance and motion, and the vision has improved to  $\frac{2}{10}$  with  $+\frac{1}{2}$ . My friend, Dr. Swan N. Burnett, of Washington, D.C., who, during the meeting of the American Medical Association, had examined the case, requested me to send him the tumor for microscopical examination when I should re-

move it. I sent him the specimen, and am indebted to his kindness for the following description of the tumor:—

*Microscopic appearances*, by Dr. Swan M. Burnett, Washington, D. C. The tumor is far from uniform in its histological structure. The connective tissue element is rather abundant in some parts, while in others it is very scant or entirely wanting. The cellular element, which is largely predominant, is likewise irregular in its distribution. It consists of rather large, round cells, with very thin cell walls, and large, granular nuclei. There are other cells, smaller, with small or no nuclei, which are distributed in somewhat large collections throughout the tumor mass. The characteristic form of myxomatous tissue is seen in abundance in all parts of the specimen. Cylinders and alveoli lined with cells in the characteristic arrangement of adenoma are met with, particularly near the centre of the section, passing through the tumor in a transverse direction. The remains of those structures are quite abundant, but in only one or two places have I been able to find them entirely intact and in anything like a normal condition. The alveoli are often filled with a hyaline mass (Becker), less frequently with round cells or granular matter.

From these appearances I think we are justified in describing the tumor as a myxo-adeno sarcoma. From an examination of this specimen alone it would not be possible to trace a general history of such tumors, but it tends to confirm the opinion of Becker\* that all the forms of tumor of the lachrymal gland hitherto described are but different stages of the same morbid growth. It seems likely that they all begin as adenomas and that the various forms of degeneration—myxomatous, sarcomatous, colloid, encephaloid, etc., come on later. The appearances in this specimen differ from that of Becker's in this, that the degeneration was greatest toward the periphery, while in his the periphery appeared the more nearly normal.

#### Systematic Report on the Progress of Ophthalmology During the Third Quarter of the Year 1881.

By H. Magnus, M.D., *Archiv. Ophthal.*, Vol. xi, No. 1, under the head of General Ophthalmological Literature.

W. Sykes. *Clinical note and remarks on a Disease of the Eyes Peculiar to Colliers (Brit. Med. Journal* xlii, p. 77, July 16, 1881). The sight first fails in bad light, and grows gradually worse, till the pupils are dilated

\* Weber, das Adenom der Thränendrüse. Bericht über die Augenklinik der Wiener Universität, 1863-65.

and insensible to light, and only a perception of light remains, while nystagmus is well marked. Recovery takes place on exposure to light and air, without other treatment. The miners attribute the disease to bad light given by the safety lamp, but Sykes believed it to be toxic, from gases accumulating in the pits.

Fialkowsky. *Ueber den Einfluss russischer Bäder auf das gesunde und kranke menschliche Auge. (On the influence of Russian baths on the healthy and the diseased human eye.)* Wratsch, 1881, No. 9. The influence upon diseased eyes is greater than on healthy eyes. After the bath the pupils are somewhat dilated, or react sluggishly; both the far point (?) and the near point are slightly removed from the eye; the range of accommodation is, therefore, somewhat diminished. Visual acuteness suffers no change. Moreover, after the bath, conjunctival and retinal hyperemia occurs; the secretion of mucus and tears becomes increased. Any inflammations present are intensified.

Gunn, R. M. *On the Continuous Electrical Current as a Therapeutic Agent in Atrophy of the Optic Nerve and in Retinitis Pigmentosa (Roy. Lond. Ophth. Hosp. Rep. vol. x, pt. 2, p. 161, June, 1881).* 1. In optic atrophy, Weiss' continuous current battery (the Foreaux-Smee; the elements are zinc and platinized silver), of 25 cells was the instrument used. The positive pole was placed on the closed eyelid, and the negative applied to the supra-orbital region, the top of the spine, and to a point just behind the mastoid process, in order to determine which position gave the greatest light impression. Five or seven cells were only employed at first. The supra-orbital region was the point selected in the majority of cases. The position of the poles was changed during the sitting, which lasted from five to six minutes. Of the eighteen cases thus treated, six improved, four were doubtful, and eight did not improve, or grew worse. Two of the six cases which improved returned some time afterward, with their sight as bad as before, and did not improve under further treatment. No really conclusive results were obtained, because of the smaller number of the cases, and the fact that this was not the sole method of treatment, as iodide of potassium, or strychnia, or other nerve tonics, are noted as having been given in all the cases but one.

Gunn considers, nevertheless, that when we compare the above results with those obtained where no galvanism has been employed, there must be a strong presumption in favor of its utility in certain cases. He is skeptical of the effi-

caciousness of iodide of potassium, and looks upon strychnia and the other nerve tonics as possibly of some use when combined with good food. He gives an analysis of the cases with reference to the question of prognosis, and the conclusion he arrives at is, that "he should give the most favorable prognosis when the patient is young or middle-aged, with recent failure of sight and present ability to count fingers, at least. Color-perception is possibly defective. The disc is white, but the large vessels are of normal size. There is no history of severe injury to the brain or spinal cord, but perhaps there are symptoms of locomotor ataxy.

*Retinitis Pigmentosa.*—Of the value of galvanism in this disease Gunn speaks hopefully. He reports four cases, in each of which there was a decided improvement. In case 1, the patient's condition on admission was, right eye,  $V = \text{fingers at } 3$ ; left,  $V = \frac{2}{3}$  with 36; and when discharged; right,  $V = \frac{2}{3}$  nearly; left,  $V = \frac{2}{4}$  nearly. Gunn refers to the literature of the subject, and draws attention to cases reported by Nefel and Dor, in which there was marked benefit by this treatment. He considers that the continuous current is capable of stimulating the conductivity of the optic nerve, both as regards the electrical current and the current originated in the impression produced upon its end-organs by means of light, and that this counteracts the degeneration of the nerve tissue which follows the absorption of light by the pathological pigment deposits. The defective blood supply also tends to produce further degeneration, and possibly galvanism has a temporary effect in dilating the blood-vessels, and so improving the nutrition of the tissue.

The caution to be observed in using the remedy is to begin with a weak current of five or seven cells for a short time, and then gradually increase if necessary.

(While observing the caution Gunn has just named, and after using the constant current in the same manner he has indicated, *i. e.*, as regards the position of the poles, I have, in specific paresis of the pupil and the forms of "neuritis optici," usually following these pareses, had decidedly satisfactory results in the way of making cures. I now consider electricity as an indispensable therapeutic agent in ophthalmology. With the positive pole on the closed eyelid, the negative pole on the top of the spine, I seldom employ more than five to six cells, and rarely excite more than the blue (weak) light impression, and if improvement be characteristic the light impression will change to white and yellow. T.)

*The Laws of Inheritance in Relation to Disease.* Lecture iv, delivered by Jonathan Hutchinson, at the Royal College of Surgeons of England. (*Medical Press and Circular*, Vol. xxxii, p. 22, July 13th, 1881.)

In his fourth lecture on "Laws of Inheritance," Jonathan Hutchinson treats of heredity of *retinitis pigmentosa*. It rarely appears at birth, though he believes the tendency to it to be present, but shortly develops and increases with age. Consanguineous marriages tend to strengthen the predisposition to the disease, and Liebreich has found it to be very common among Jews. *Retinitis pigmentosa* is allied to certain forms of *choroiditis* and to disease of the optic nerve. In *retinitis pigmentosa* the choroidal structure is interrupted and the retina is gradually obscured by a dense pigmentary deposit. The vessels shrink, and when once the series of events is established, it pursues a certain and inevitable course to the end. He then refers to the tendency of defects of the optical structure of the eye to be transmitted and become hereditary, and quotes cases in point, *e.g.*, myopic families. He further says: functional changes once duly fixed by pathological changes are transmitted from individual to individual, and that which at the outset ranked only as an idiosyncrasy may by and by develop into a determined disease. An instance of this is afforded by a form of *amaurosis* due to the excessive tobacco smoking, the tobacco here acting not as the actual producing cause of the disease, but as an excitant of the tendency to defect when once originated.

## CORRESPONDENCE.

### Medical Legislation.

ED. MED. AND SURG. REPORTER:—

In a recent number of the REPORTER you favored the profession with a few very valuable "Hints Concerning Medical Legislation;" and as these apply specially, no doubt, to the profession in Pennsylvania, a few additional remarks may be useful. We must educate ourselves; and we believe that a much larger space should be given to this subject in our medical journals. At the same time we must educate our legislators and the people; and this can be done best through memorials, correspondence and our daily newspapers. The school is large and there are in it many dull scholars. The teaching thus far may not have been the best, but we have made progress. Nearly every practitioner in the State has registered, under the recent act of Assembly.

The failure of the committee appointed by our State Medical Society to secure the passage of an act to provide for a State Board of Health has restricted the committee on medical legisla-

tion, appointed by the same Society, to a kind of legislation which has necessarily in it the elements of weakness. A standing argument against the establishment of a Board of Health has been the creation of a new office, to be filled by partisan influence. The Committee on Medical Legislation understand this subject quite well, and have not been disposed to ask for a Board of Medical Examiners for the State, as this would give rise to another office or bureau, to be filled in a similar manner. Moreover, it is agreed by these committees, that there is really no necessity for two boards; and further, that the efforts of the profession should be centred upon one object, the organization of a State Board of Health, with authority to supervise the registration of medical practitioners. To *load down* a measure of this kind with the minutia of registration may not be politic, and hence a supplement to the present registration act has been prepared, transferring the duties now imposed upon the faculties of our medical colleges, to a Board of Health.

The registration act referred to (see REPORTER, June 25th, 1881), is *prospective* in its leading features, and if we should not be able to secure the passage of a supplement, it will produce good results in the counties in which the profession take an interest in its enforcement. A grand jury cannot object to registration; it will be more difficult to stop a bogus diploma man, or a non graduate who has been in the continuous practice of medicine since 1871. A retro-acting law, which would cut off ten per cent. of the present practitioners, even if it could be passed, would be inoperative, without authority vested in a board of health or some other body of men to enforce it.

At the bottom of this whole subject is the fact that our government does not favor a high standard in the profession. The independence of the States prepares the way for sectarian medicine, and for any number of chartered medical schools of low grade. A half-dozen pretentious men, without education and without money, can obtain a charter for a medical school in any of our States, and do a thriving business. We have some, I fear many, such institutions in our country, and hence we are brought to the conclusion that the degree of Doctor of Medicine can no longer be taken as conclusive evidence of fitness to practice medicine. A license issued by a competent board of examiners has become a necessity.

Carlisle, Pa.

R. L. SIBBET, M.D.

## NEWS AND MISCELLANY.

### Proposed International Hygienic Convention.

Dr. L. de Csatary proposed, at the late Geneva Congress, the formation of such a convention, for the purpose of securing uniformity in national legislation affecting the public health. It is suggested that an international committee of surveillance should be created to secure the observance of such hygienic measures as might be adopted in common by the various nations leagued together. A committee was appointed to present the matter in due shape to the next congress, at the Hague.

## American Academy of Medicine.

The seventh annual meeting of the American Academy of Medicine will be held in the Hall of the College of Physicians, Thirteenth and Locust streets, Philadelphia, on Thursday, October 26th, at three o'clock, p.m. The President, Dr. Traill Green, of Easton, Pa., will deliver an address at 8 p.m., Thursday, at the College of Physicians, to which the medical profession is invited.

RICH'D. J. DUNGLISON, *Secretary.*

## John Hunter.

Dr. Oliver Wendell Holmes pays the following tribute to John Hunter: "A great comparative anatomist, a great physiologist, the creator of a vast museum, the author of innumerable original observations of interest to medical science, a surgeon of distinction, a man of powerful native genius, insatiable in thirst for knowledge, indefatigable in accumulating it, his works have been treated as quarries by those who came after him, as the Coliseum was used to build up palaces for the Roman nobles of later ages."

## A Rescue Boat Race.

We learn from the *Lancet* that at the late Clevedon regatta, a novelty was introduced in the shape of a "Rescue race." The idea was originated by Dr. Richardson, F.R.S., who is staying at Clevedon, who gave the first prize, of \$5.00, Mrs. Richardson giving the second, of \$2.50. The whole of the competing boats had to be stranded high and dry upon the beach, and at a given signal the men had to get them launched, and then proceed to try to pick up one or two objects, representing drowning men floating about three-quarters of a mile out in the bay.

## Items.

—The Very Rev. Dr. Egan has been appointed Rector of the Catholic University, and a Fellow of the Royal University of Ireland.

—Dr. Strange, the President of the British Medical Association, has been elected an honorary member of the Société Française d'Hygiène.

—From the *British Medical Journal* we learn that, from the annual report of the receipts and expenditures of the City of London, just published, it appears that the cost of entertaining the members of the International Medical Congress to the *conversazione*, last year, in the Guildhall, amounted to \$10,495.

—In the *Wiener Med. Wochenschrift*, No. 35, Dr. Ludwig Klaar reports a fatal case of perforation of the cesophagus, due to a wood-shaving having become impacted in the gullet at the level of the bifurcation of the trachea. The thoracic aorta was eaten into, and this led to the man's death by profuse hemorrhage.

—The municipality of Turin lately opened a competition for the best treatise on hygienic science as applied to the requirements of rural districts. The prize has been awarded, by the jury charged with the decision, to Dr. Layet, professor of hygiene at Bordeaux. It consists of a sum equal to about \$500.00.

## OBITUARY NOTICES.

## WILLIAM PIERSON, M.D.

Dr. William Pierson died at his residence in Orange, N. J., Oct. 1st, in the eighty-sixth year of his age. He was born in 1796, was graduated from Princeton College in 1816, in the same class with the late Bishop McIlvaine and ex President Maclean, of that college, and began the practice of medicine in 1820. He belonged to a family of physicians, comprising his grandfather, Matthias Pierson; his father, the Hon. Isaac Pierson, for some years a member of Congress; himself, and his son, William Pierson, Jr., all of Orange. He was for thirty years the Secretary of the New Jersey Medical Society, and afterwards its President, and at the time of his decease was the oldest physician of the State. During his long life he was prominent in public matters, as well as his profession, having been a member of the New Jersey Legislature between 1835 and 1840, and from 1849 to 1852 Sheriff of Essex county, in which office he was succeeded by his brother, Edward Pierson, and the first mayor of the city of Orange.

—Dr. Frazer, ex-member of the Canadian Parliament and a prominent physician, of Welland, Ontario, is dead.

## QUERIES AND REPLIES.

In reply to query of "J. N. R., Pa.," in your issue of May 6th, 1882, as to whether any of your readers ever heard of twins living to maturity and both having families, I would say that in my practice there are two families having twins grown up, all four of whom have children; are healthy and prolific. R. B. E.

*McKnightstown, Pa.*

## MARRIAGES.

BAILEY—BANCER.—On Wednesday, Oct. 4th, at the residence of the bride's parents, No. 4<sup>th</sup> Clinton Avenue, Brooklyn, by the Rev. Emory J. Haines, Fred. D. Bailey, M.D., of New Milford, Penn., and Margaret M., daughter of William D. Bunker.

BALLANTINE—WALKER.—On Wednesday evening, Oct. 4th, by the Rev. H. L. Duhring, Rector of All Saints' Church, at No. 1700 S. Tenth street, C. Hamilton Ballantine, M.D., and Miss Clara A. Walker, both of this city.

CORRY—CORTELYOU.—In Brooklyn, Oct. 3d, by the Rev. Henry A. Davenport, of Bridgeport, Albert M. Curry, M.D., and Phebe D. Cortelyou, both of Brooklyn.

GRIFFITH—JENKS.—On Thursday, October 5th, in the Woodlands Presbyterian Church, Forty-second and Pine streets, by the Rev. Dr. Benjamin Griffith, assisted by the Rev. Dr. Crowell, Dr. J. P. Crozer Griffith and Julia E., youngest daughter of Barton H. Jenks, all of Philadelphia.

HARVEY—GREEN.—At East Orange, N. J., Oct. 3d, 1882, at the residence of James C. Bayles, by the Rev. Alfred Yeomans, D.D., Katharine Green, daughter of the late Edward Green, of New York, and Dr. Thos. W. Harvey, of Orange, N. J.

NILSEN—WHITTEMORE.—In New York, on Tuesday, Oct. 3d, at the residence of the bride's parents, by Rev. Dr. William M. Taylor, Jonas Rein Nilsen, M.D., and Laura, daughter of Thomas W. Whittemore.

## DEATHS.

ANDERSON.—At Kingston, N. Y., on Saturday night, Sept. 3d, Dr. Wm. C. Anderson, of Staten Island.